TEAC®

A-2520/2420

STEREO TAPE DECK

SERVICE MANUAL

TEAC CORPORATION

SALES OFFICE: SHINJUKU BUILDING
1-8-1, NISHI-SHINJUKU, SHINJUKU, TOKYO

TEAC HONGKONG LIMITED
MAIN OFFICE: ROOM NO. 1105
MELBOURNE PLAZA, 33 QUEEN'S ROAD C.
HONG KONG

U.S. DISTRIBUTOR: TEAC CORPORATION OF AMERICA
7733 TELEGRAPH ROAD
MONTEBELLO, CALIFORNIA 90640
U.S.A.

EUROPEAN DISTRIBUTOR: TEAC EUROPE N.V.
KABELWEG 45-47, AMSTERDAM-W. 2,
HOLLAND

MT2520E100

PRINTED IN JAPAN 272E1-S-0043

1.GENERAL DESCRIPTION

The new TEAC A-2420 will reproduce 4 channel quadriphonic and 2 channel stereo recordings. TEAC A-2520 is a versatile unit capable of quadriphonic playback, 2 channel recording and playback. Both models incorporate automatic reverse, automatic repeat and continuous play capability.

The transport mechanisms of the A-2420/2520 are identical with the exception of head configurations.

This service manual provides adjustment and alignment procedures, schematic diagram and parts replacement information and the proper procedures for obtaining necessary repair parts.

If adjustments or repair procedures are not clear or seem difficult to accomplish or should you desire more detailed technical information, please contact your nearest TEAC dealer, TEAC Corporation or affiliated corporations, addresses of which are printed in this manual.

INDEX

1. GENERAL DESCRIPTION
2. SERVICE DATA
3. EQUIPMENT REQUIRED
4. PARTIAL DISASSEMBLY
5. HEAD ALIGNMENT -MECHANICAL-
6. MEASUREMENT AND ADJUSTMENT -MECHANICAL-
7. MEASUREMENT AND ADJUSTMENT -ELECTRICAL-
8. PREVENTIVE MAINTENANCE
9. TROUBLE SHOOTING
10. PACKING FOR SHIPMENT
11. TAPE TRANSPORT PARTS LOCATION

MANUAL CHANGES

SCHEMATIC DIAGRAMS

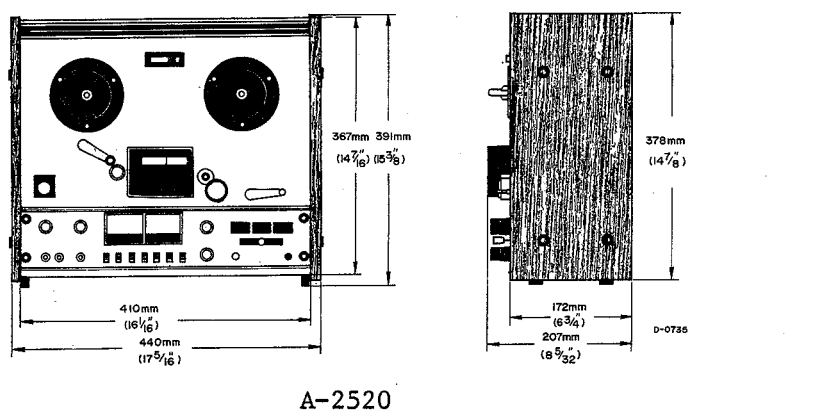
PRINTED CIRCUIT BOARD AND PARTS LIST

EXPLODED VIEW AND PARTS LIST

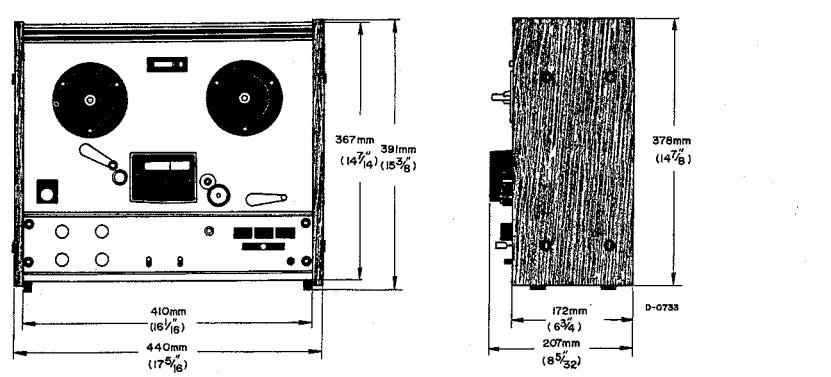
2.SERVICE DATA

MECHANICAL

HEADS:	A-2420 one, 4 track 4 channel playback A-2520 two, 4 track 4 channel playback Four track 2 channel stereo Erase/Record
REEL SIZE:	7" and 5"
TAPE SPEED:	7-1/2ips and 3-3/4ips (±5%)
MOTORS:	One dual speed hysteresis synchronous capstan motor. Two eddy current induction reel motors.
WOW AND FLUTTER:	0.08% at 7-1/2ips 0.10% at 3-3/4ips playback Wow and flutter measured according to weighted NAB standard using TEAC flutter free tape.
FAST WINDING TIME:	Approx.90 seconds or less for 1200 feet
POWER REQUIREMENTS:	100/117/200/220/240 V AC 50/60Hz/40W
WEIGHT:	37-1/2 lbs (17 kg) net



A-2520



A-2420

Dimensions

ELECTRICAL

TRANSISTORS:	A-2520	A-2420
	2SC828(S) × 16	2SC828(S) × 8
	2SC644(S) × 8	2SC644(S) × 4
	2SA666I(S) × 4	2SA66I(S) × 4
	2SC971 × 2	2SC1000(BL) × 4
	2SC1000(BL) × 4	2SD235(O)
	2SD235(O)	2SC733(Y)
	2SC733(Y)	
FREQUENCY RESPONSE:	Overall from recording INPUT to playback OUTPUT 7-1/2ips, 40Hz∿18kHz ±3dB 3-3/4ips, 40Hz∿10kHz ±3dB	
EQUALIZATION:	NAB equalization 7-1/2ips 50μsec. 3-3/4ips 90μsec.	
INPUT:	MIC: 0.3mV/10kΩ LINE: 0.1V/100kΩ	
OUTPUT:	LINE: approx.0.3V/10kΩ or more HEADPHONE: 0.3mV/8Ω	
BIAS FREQUENCY:	100±5kHz push-pull oscillator	
CROSSTALK REJECTION:	35dB adjacent track at 100Hz	
CHANNEL SEPARATION:	45dB channel to channel at 1kHz	
SIGNAL TO NOISE RATIO:	7-1/2ips 48dB or higher 3-3/4ips 45dB or higher	
ERASE EFFICIENCY:	60dB or more	

NOTE

As a result of continuing changes and improvements during the production run, minor differences may be found between early and later machines, refer to manual change sheets for information concerning modifications.

3.EQUIPMENT REQUIRED

FOR MECHANICAL MEASUREMENT

SPRING SCALE:	0 - 3kg(0 - 8lbs) 0 - 300g(0 - 10oz)
TEST TAPE:	TEAC YTT-2003 (7-1/2ips) TEAC YTT-2002 (3-3/4ips)
WOW & FLUTTER METER:	SENTINEL INC FL-3D-1
DIGITAL FREQ. COUNTER:	Capable of 0 to 5kHz indication.
TOOLS:	General, 2mm nut driver, Hex head allen wrench

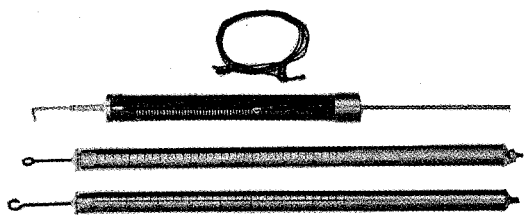


Fig. 4-1 Spring Scale

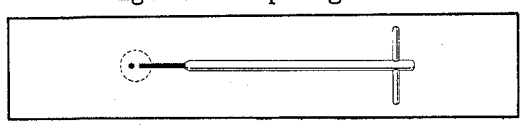


Fig. 4-2 TEAC Hex Alen Wrench

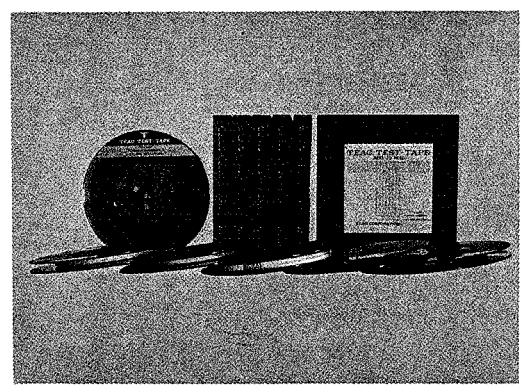


Fig. 4-3 TEAC Test Tapes

FOR ELECTRICAL MEASUREMENT

TEST TAPE:	TEAC YTT-1003 for 7-1/2ips TEAC YTT-1002 for 3-3/4ips SCOTCH 203 and 150 for test recording .
EMPTY REEL:	TEAC RE-702(2" hub) TEAC RE-701(4" hub)
TEST SET:	TEAC M-826A test set

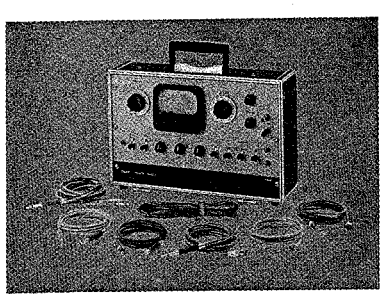


Fig. 4-4 TEAC Test Set

NOTE

Use of the TEAC M-826A test set is recommended. This set incorporates an AC VTVM, Audio Oscillator, Channel Selecting switch, Variable Attenuator, Monitor Speaker and Cables.

TEAC M-826A measures the RMS value of the Voltage(0dB=0.775V). Characteristics of this test set are similar to the standard VU-meter.

BAND PASS FILTER:	TEAC M-206A(1kHz)
VTVM:	hp model 4302B or equivalent
RESISTOR:	Non inductive type 8ohm/1W
OSCILLOSCOPE:	General

4.PARTIAL DISASSEMBLY

> CAUTION
> Do not attempt complete disassembly of any of the subassemblies.
> The list of individually replaceable parts in the exploded view should be used as a guide to disassembly limits.

REMOVING THE REAR PANEL AND WOODEN SIDES

1. Loosen the four screws on each wooden side.
2. Remove the six screws holding the rear panel.
3. Lift off rear panel.
4. Remove the eight screws in the two wooden sides.
5. Remove the wooden sides.

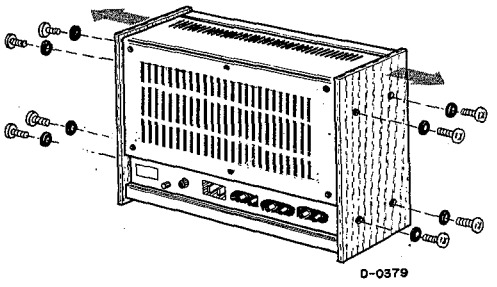


Fig. 4-1 Removing Wooden Sides

REMOVING THE BOTTOM PLATE

1. Place the unit upside down.
2. Remove the three screws in the bottom plate.
3. Lift off bottom plate.

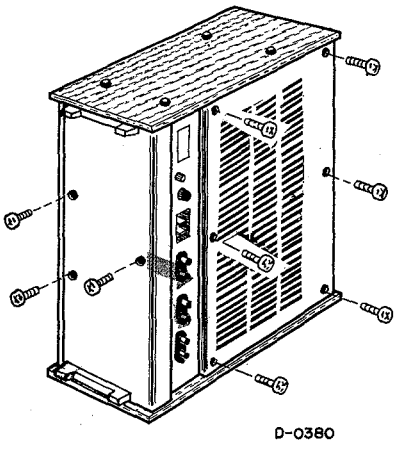


Fig. 4-2 Removing Rear Panel and Bottom Plate

*All amplifier checks and adjustments can be made from the bottom with the plate removed.

> CAUTION
> These adjustments should be performed by experienced technicians, and then only when going through the complete test and check procedures on the unit which is being tested.

HEAD REPLACEMENT

CAUTION

Power to the unit must be switched off when removing the heads, this will prevent transient pulses from passing through the heads causing strong magnetization or damage to the delicate windings. After head replacement, thorough demagnetization is recommended.

NOTE

The heads of the A-2420/2520 can be changed either as a complete assembly or individually as required.

HEAD ASSEMBLY REPLACEMENT

To change the head assembly as a unit, remove the two mounting screws, (one on each end).
Note the positions of the wires on the circuit board before unsoldering.
Solder the wires of the new assembly in exactly the same positions.

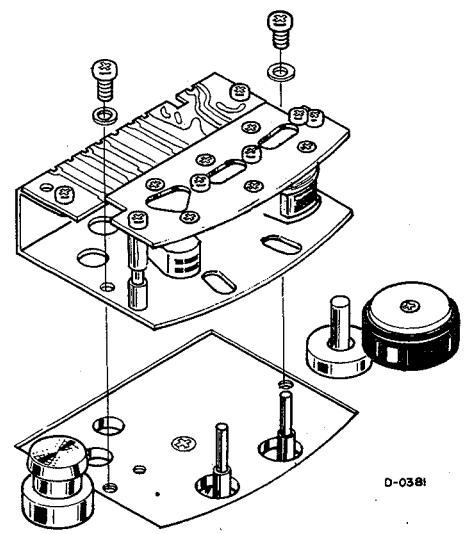


Fig. 4-3 Head Assy

INDIVIDUAL HEAD REPLACEMENT

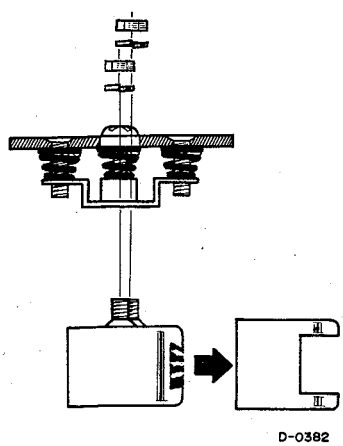


Fig. 4-4 Individual Heads

To replace a single head, a special 2mm nut driver is required. Remove the two nuts on the defective head through the access hole provided, this releases the head from the mounting plate.. Note the position of the wires on the circuit board. Connect the new head in the same manner.
Replace the nuts securing the new head to the plate, perform head alignment before operation.
Head installation mounting provides for left or right positioning. After installing heads, determine proper position while recording or playing back a tape.

REMOVAL OF CAPSTAN MOTOR

1. Remove the three screws holding the capstan motor (top).
2. Unsolder the six wire connecting the capstan motor.
3. Remove the four screws holding the capstan motor (bottom).
4. Loosen the two set screws (hex head) in pulley and lift off pulley.

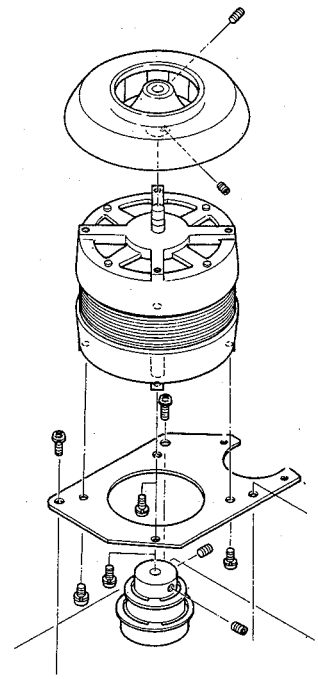


Fig. 4-6 Capstan Motor Removal

REMOVAL OF CAPSTAN ASSY

NOTE

A clearance of 0.01" must maintained between the flywheel and capstan assembly.

1. Unscrew capstan cover (front panel).
2. Remove two screws from rear bracket, allow bracket to drop toward floor of case.
3. Remove capstan belt.
4. Loosen two screws in capstan assy flywheel. Remove flywheel.
5. Remove three screws in capstan assy.
6. Gently move capstan assy up and down until it slides out of panel.

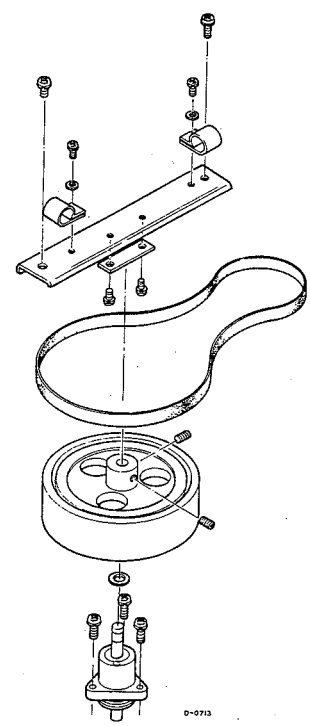
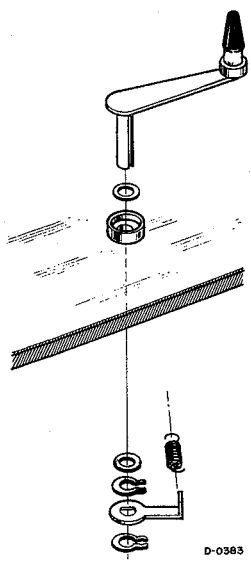


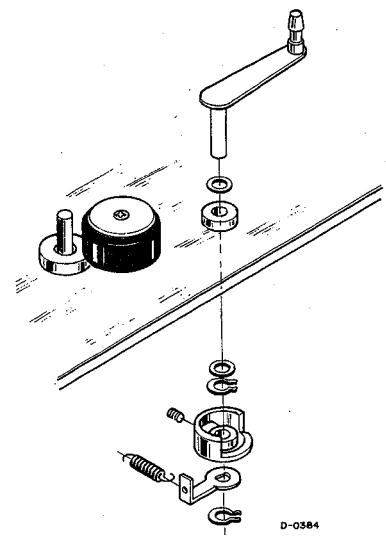
Fig. 4-7 Capstan Assy Removal

REMOVAL OF: TENSION ARMS LEFT & RIGHT

See illustration for complete disassembly instructions.



IMPORTANT
After reassembly check clearance to ascertain that arm moves freely and is not binding.



REMOVAL OF: REEL MOTOR ASSY

1. Loosen 2 hex screws in brake drum, lift off brake drum.
2. Remove 3 screws securing the brake assembly to the motor.
3. Remove reel turntable, remove 4 screws securing motor to front panel.

NOTE

Reel motor assemblies are mirror images of each other, these assemblies are not interchangeable.

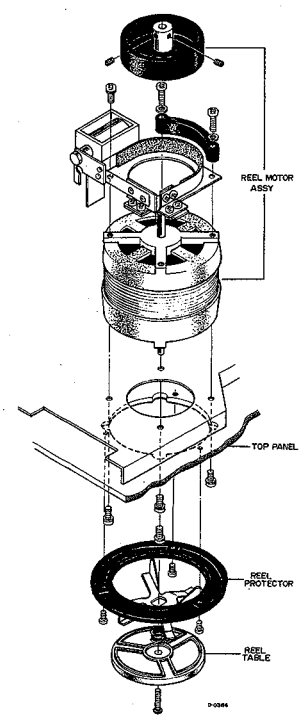


Fig. 4-8 Reel Motor Removal

5.HEAD ALIGNMENT

—MECHANICAL—

NOTE

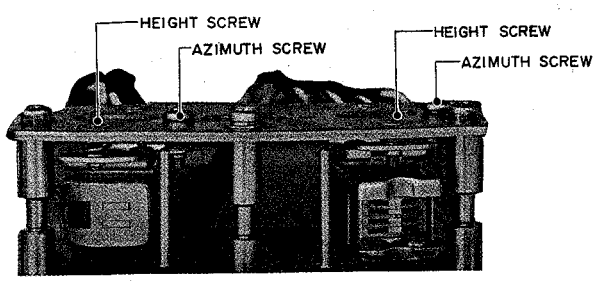
Head alignment is adjusted at the factory to very critical tolerances. Normally HEAD ASSEMBLY replacement will require only minor alignments or adjustments.
Complete readjustment should only be necessary after an individual head is replaced.

ERASE/RECORD COMBINATION HEAD -A-2520-

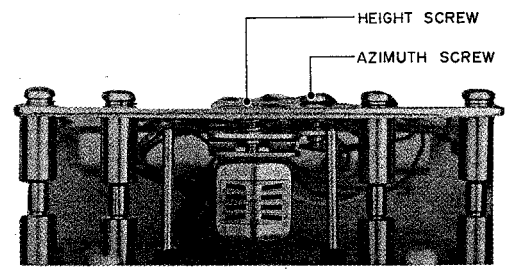
The combination head pole should be above the edge of a threaded tape by the width of heavy pencil line.

PLAYBACK HEAD

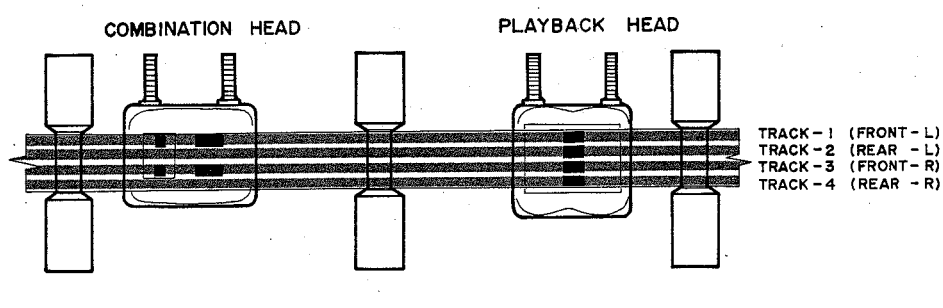
The pole of the playback head should be even with the top of a threaded tape.



ERASE / RECORD COMBINAION



A-2520 HEAD CONFIGURATION A-2420

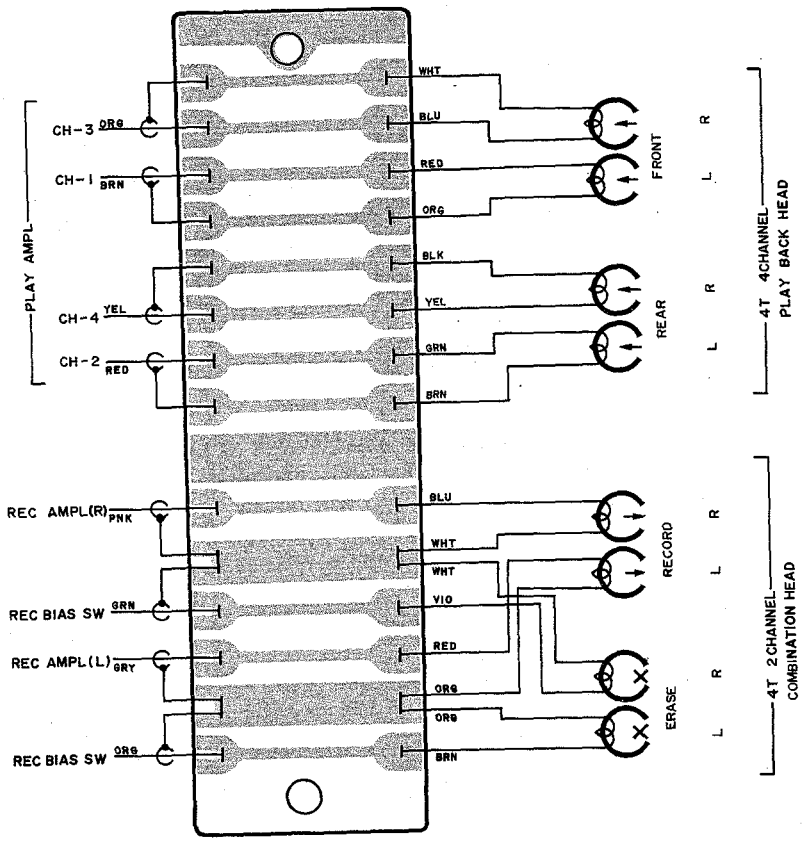


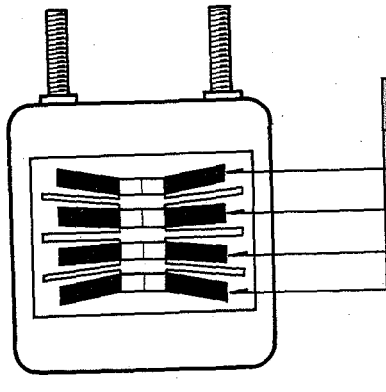
M-0104

NOTE

Azimuth adjustments are given in the section on MEASUREMENTS AND ADJUSTMENTS -ELECTRICAL-.

HEAD WIRING





CHANNEL	L·R	COLOR CODE	
CH1	FRONT L	RED	ORG
CH2	REAR L	GRN	BRN
CH3	FRONT R	BLU	WHT
CH4	REAR R	YEL	BLK

D-0738

4T 4CHANNEL HEADS

6.MEASUREMENT AND ADJUSTMENT
—MECHANICAL—

NOTE

The TEAC A-2520/2420 uses a highly reliable three motor drive system and should require a minimum of mechanical maintenance or adjustment.
These adjustments are made at factory. Readjustment should only be required after many hours of operation or component replacement.

PINCH ROLLER PRESSURE

NOTE

Pinch roller pressure is supplied by pinch roller spring arm only and it is most important that the solenoid plunger be fully bottomed before taking pressure measurement.

1. Load tape or lock the shut-off arm in the on position.
2. Attach a suitable spring scale to the pinch roller shaft.
3. Place the unit in the(▶) PLAY mode, and holding the spring scale as illustrated, slowly draw it away from the pinch roller.
4. Do not allow the string to rub against the pinch roller.
5. Note the reading on the spring scale at the instant the pinch roller stops rotating.
6. The scale should indicate 2.0 - 2.2kg (5.01bs - 5.61bs).
7. If adjustment is necessary, loosen the three screws on the capstan solenoid and position the solenoid for optimum pressure.
8. Adjust stopper position so that the gap between capstan shaft and pinch roller is approximately 7mm(9/32inch).

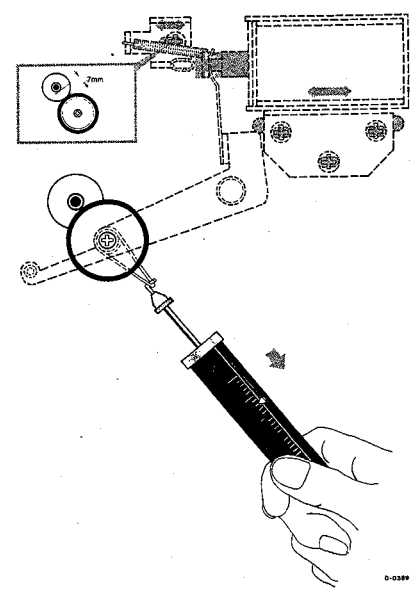


Fig. 6-1 Pressure Measurement -Pinch Roller-

TORQUE ADJUSTMENT PROCEDURE

NOTE

Adjustable resistors for both reel motors are wired as shown in the figure. R-1 is common to both motors and R-2 is switched between motors. Perfect adjustment of one motors tension may result in the other motors tension exceeding allowable limits. In this case a compromise should be made.
Position R-1, R-2 for optimum torque of both motors.

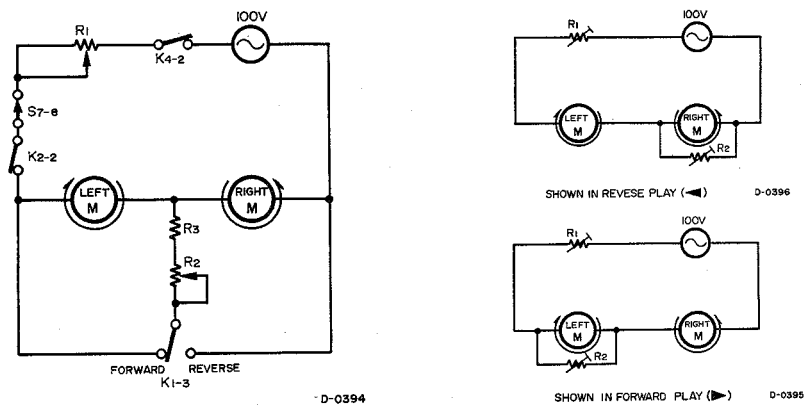


Fig. 6-2 Torque Operation

Perform following adjustments with unit in Forward Play.

1. Measure the back tension of the left reel motor and the take-up torque of the right reel motor.
2. Adjust R-1 (50 ohms) if measurement value of right or left reel motor exceeds the specified limits. (Coarse adjustment)
3. After adjusting R-1, adjust R-2 to bring back tension and takeup torque to exact specified limits.

NOTE

Adjustments will interact. Several adjustments may be required to bring both motors within specifications.

4. After adjusting R-1 and R-2 in forward play mode, switch to reverse mode and check back tension(Right) and torque(Left).
   Operation should be within specified limits. If not perform adjustment 1 - 3 again for reverse operation.
5. Recheck forward operation as in step 1 above. If forward operation can be satisfactorily adjusted but reverse operation cannot, a new motor may be required.

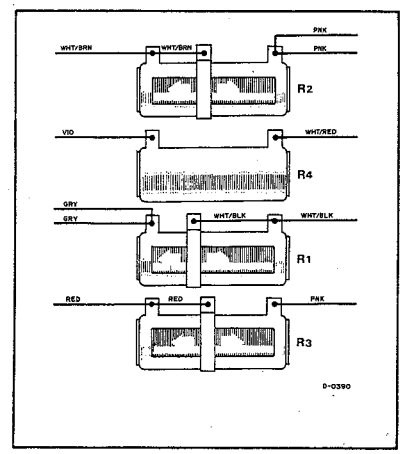


Fig. 6-3 Adjustable Location -Tension Resistors-

TORQUE MEASUREMENT PROCEDURE

IMPORTANT

Be sure the full required line voltage is applied and that the unit is set to the proper line frequency.

BACK TENSION - Forward

1. Load tape or block the shut-off arm in the on position.
2. Place an empty 7" reel with a 2" diameter hub on left reel table.
3. Rotate the reel and wind several turns of string around the hub. Attach spring scale to string.
4. Place the unit in the (▶) play mode.
5. Pull the scale away from the reel against the motor torque, with a steady smooth motion.
6. Note the scale reading while it is in steady motion.
7. Make sure the string does not rub against the reel flanges.
8. The reading should be approximately 180 - 220g/cm(2.8 - 3.1oz-inch).

Reverse:

9. To check the reverse back tension, place the reel and spring scale on the right reel table(see figure) and repeat above procedure pressing(◀)play button.

TAKE-UP TORQUE - Forward

1. Place the empty reel and attached spring scale on the right reel table.
2. Place the unit in the (▶) play mode.
3. Allow the rotation of the reel to slowly draw the scale toward the hub.
4. Hold the spring scale with enough force to allow a steady reading.
5. It should be approximately 360 - 400g/cm(4.1 - 4.8oz-inch).

Reverse:

6. Place the empty reel and spring scale on the left reel table and select (◀) reverse play mode.
7. The measurement of reverse take-up torque is as above with the exception that rotations are clockwise.

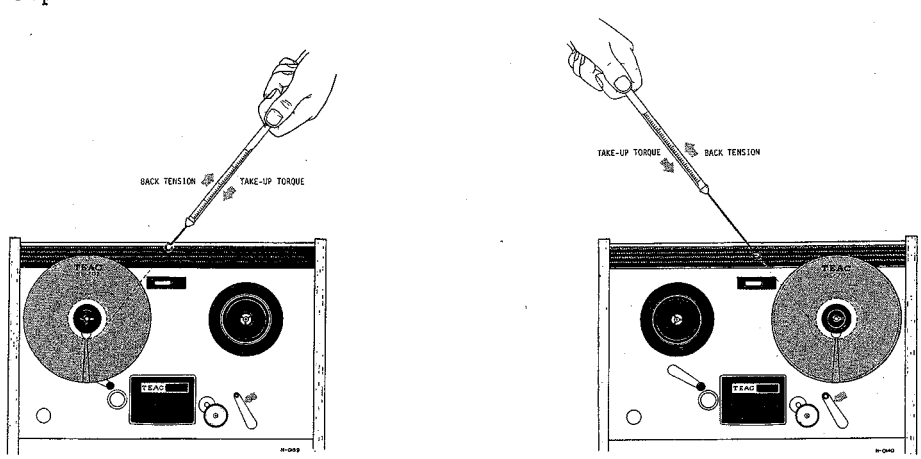
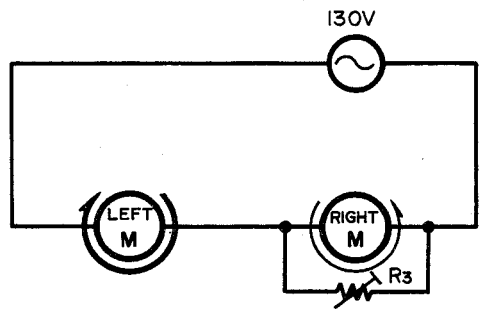


Fig. 6-4 Torque Measurement

REWIND BACK TENSION

1. Load a full 1,800ft reel of tape on the right reel table.
2. Place the empty reel with 2" hub on the left reel table.
3. Place the unit in the fast rewind mode, (◀).
4. At this time observe the right tension arm. Adjust R3 so that the arm moves approx. 1" to the right and remains there.



SHOWN IN REWIND MODE D-0397

Fig. 6-5 Torque Operation

BRAKE TORQUE

NOTE

The brake torque is actuated mechanically. Pressure is set by the variable spring force.
While making this measurement and adjustment, be careful not to bend the brake bands.
As brake torque will change with cleaning, brake drums and brake shoes should be cleaned only when absolutely necessary. If cleaning is required, use TEAC cleaner TZ-251B only. After cleaning operate the machine for some time before performing the below procedures.

1. Brake adjustments are made with no power applied to the unit.
2. Place an empty 4" hub reel on the left reel table, and fasten one end of a 30" length of string to the reel anchor.
3. Wind several turns of string counterclockwise around the hub and attach a suitable spring scale to the free end of the string.
4. Pull the spring scale away from the reel, making sure that the string does not rub the reel flanges.
5. Take a reading only when the reel is in steady motion since the force required to overcome static friction will produce a false, excessively high initial reading.
6. The reading should be 900 - 1,100g-cm(13 - 14oz-inch).
7. If adjustment is required, loosen the two screws shown and position the brake for optimum torque.
8. The adjustment of the right brake is the same, with the exception that rotations are clockwise.

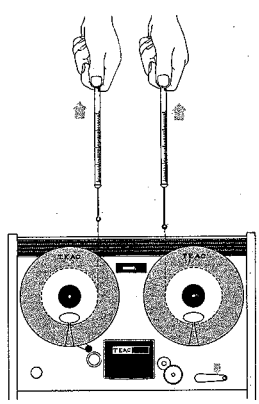


Fig. 6-6 Torque Measurement -Brake-

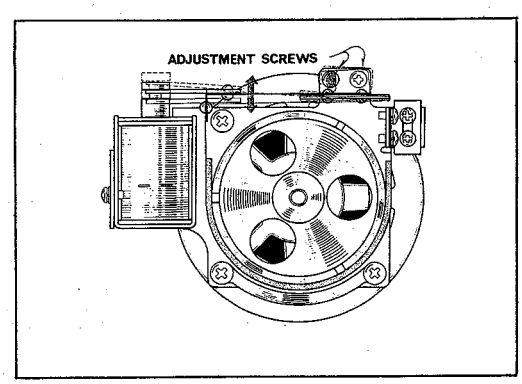


Fig. 6-7 Adjustable Location -Brake-

IMPORTANT

The difference in torques between the right and left brake should be kept within 50g-cm(0.7oz-inch).

REEL HEIGHT ADJUSTMENT

Adjustment of reel height should be necessary only after a motor has been replaced.
The following procedure should be closely followed.

Coarse Adjustment

NOTE

Coarse adjustment of reel height is accomplished by loosening the two hex head allen screws on the motor shaft collar. TEAC allen (hex head) wrench is required (order No. 50860210).

- Access to these screws is from the top of the unit.
- After loosening these screws slide the shaft to the desired height, using the motor mounting plate as a reference.
- Turn fine adjustment screw to full clockwise.

Fine Adjustment

- If perfect alignment cannot be obtained in this manner, a vernier (fine) adjustment is provided.
- The screw in the outer end of the motor shaft can be used to correct up to approximately 0.004 inches.

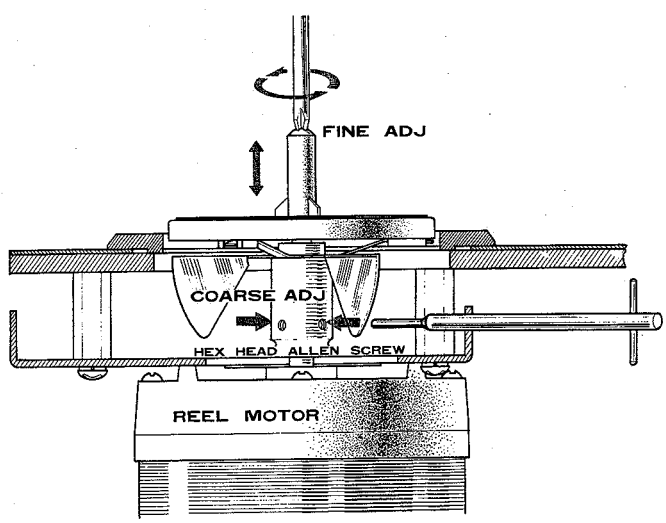


Fig. 6-8 Adjustment -Reel Table High-

FLUTTER

Flutter should be measured in playback mode using a TEAC flutter free tape YTT-2003·2002 and a Sentinel Inc model FL-3D-1 flutter meter.
Measurement of flutter should be made in accordance with NAB standards.
Values obtained by a different standard or equipment cannot be compared.
Flutter should not exceed 0.12% for 7-1/2ips and 0.15% for 3-3/4ips.
These figures apply to any tape position and direction(such as full take-up reel, full supply reel or about mid point). If flutter is excessive, refer to trouble shooting chart in this manual.

TAPE SPEED

The tape speed should be measured using TEAC flutter free tape, model YTT-2003·2002
These tapes contain a highly accurate 3kHz tone.
Connect a digital frequency counter to either line OUTPUT jack.
The indicated frequency should be 3kHz ±0.5% for all speeds.

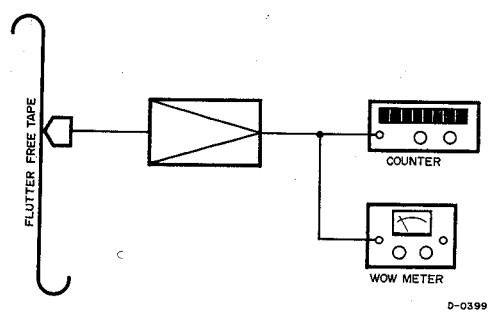


Fig. 6-9 Test Equipment Set-Up Flutter And Tape Speed

FAST WIND TIME

NOTE

Clean all tape guide components and check for proper AC line voltage.

Using a 1,200 foot tape on a 7" reel, the fast wind time(fast forward or fast rewind) should be 100 seconds or less.

VOLTAGE AND FREQUENCY CONVERSION

Unit must be set to the power line frequency available. Improper frequency setting will result in a 20% error between the tape speed and reel motors torque.

NOTE

US Model is preset to 117V AC and 60 Hz. No frequency conversion is required. If it should be necessary to convert the A-2520/2420 unit it may be easily accomplished as follows:

Voltage Conversion

The A-2520/2420 may be set for 100, 117, 200, 220 or 240 volts. To change the voltage unscrew the fuse in the center of the voltage selector plug. Pull out the plug and reinsert it so the desired voltage shows in the cutout. Reinstall the fuse.

Fig. 6-10 Voltage Conversion

Frequency Conversion

1. Set frequency selector switch on the rear of the unit to the required frequency. The slide switch in the figure, changes reel motor torque by changing the value of the starting capacitor. Set the slide switch to match line frequency in your area.
2. Remove the rear plate. (Refer to "REMOVING THE REAR PLATE".)
3. Move the drive belt on the pulley and flywheel. In this equipment, the motor pulley has two steps, permitting frequency change by simply moving the drive belt from one step to the other. The belt moving process should begin from the flywheel when converting from 60 to 50Hz operation, or from the pulley when converting from 50 to 60Hz operation. Following completion of the process, turn the flywheel manually to ensure that the belt has been positioned properly. The smaller diameter portion of the motor pulley is for 60Hz operation.

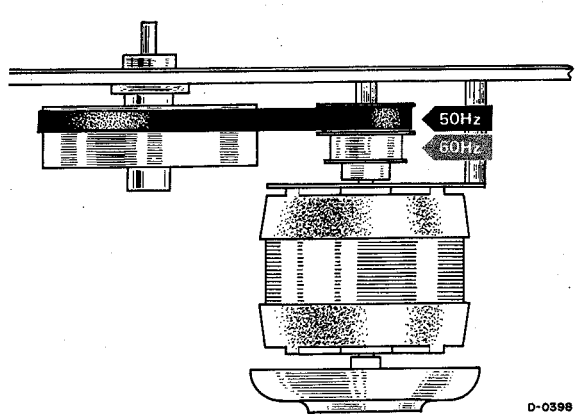


Fig. 6-11 Frequency Conversion

7.MEASUREMENT AND ADJUSTMENT
—ELECTRICAL—

GENERAL NOTICE

Before performing maintenance on this unit, thoroughly clean and demagnetize the entire tape path.

It is important that the unit be set to the proper voltage and frequency for your locality.

TEAC specified standard test tapes and test equipment must be used when performing maintenance to insure reliable results.

Procedures for checks and adjustments, unless otherwise indicated, are for the left channel at a tape speed of 7-1/2ips. The same procedures are to be applied to the right channel and again for both channels at 3-3/4ips, and both directions of playback.
All controls mentioned in this book will be printed in bold letters and will be exactly as they appear on the unit.

Double designated symbol numbers refer to left channel/right channel.

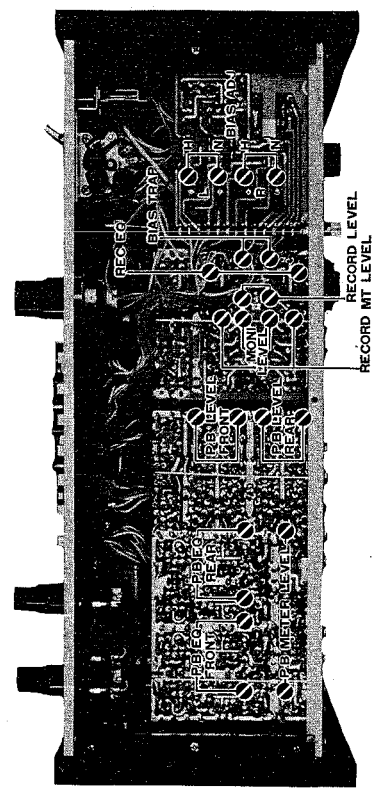


Fig. 7-1 Adjustment Locations

PLAYBACK PERFORMANCE ADJUSTMENTS

CHANNEL		P.B EQ	P.B LEVEL	VU METER LEVEL
FRONT	L(1)	VR101	VR201	FRONT L, R → L-VR205; L, R → R-VR206; REAR L, R
	R(2)	VR102	VR202	
REAR	L(3)	VR103	VR203	
	R(4)	VR104	VR204	

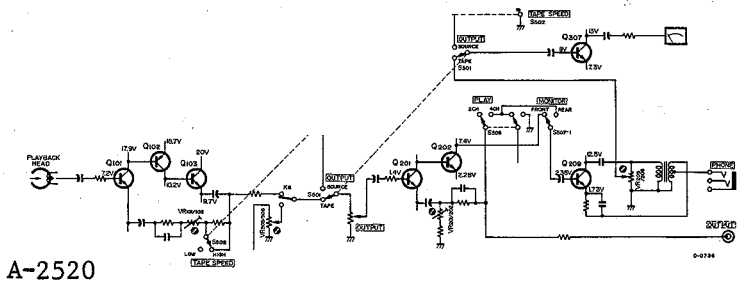
RECORD PERFORMANCE ADJUSTMENTS

CHANNEL	MONITOR LEVEL	METER LEVEL	REC LEVEL	REC EQ
L-CH	VR301	VR303	VR302	L301
R-CH	VR304	VR306	VR305	L303

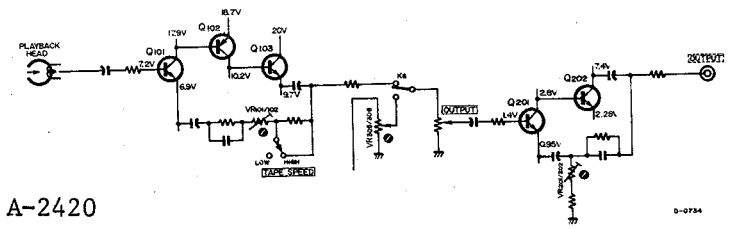
BIAS ADJUSTMENTS

BIAS / CH	HIGH BIAS	NORMAL BIAS	BIAS TRAP
L-CH	VC-401	VC-402	L-302
R-CH	VC-403	VC-404	L-304

PLAYBACK PERFORMANCE



A-2520



A-2420

Fig. 7-2 Simplified Diagram -Playback-

PROCEDURE FOR CHECK AND ADJUSTMENT

Power supply check and adjustment.
Check the voltage at VR-1 and adjust to +23V DC if required.
(Refer to control board on the schematic diagram.)

PLAYBACK HEAD AZIMUTH ADJUSTMENT

Coarse Adjustment

1. Connect a level meter to either OUTPUT jack.
2. Thread a TEAC test tape YTT-1003 on the unit.
3. Play the 15 Hz test tone in section 2 of the test tape.
4. Slowly rotate the azimuth screw until maximum indication is obtain on the level meter.

NOTE

If during playback, a slight pressure on the heads results in a rise of the reading of the level meter, head alignment adjustments should be accomplished.

Fine Adjustment

It is absolutely essential to accomplish the coarse adjustment before using this method to avoid phase errors larger than 45°. After coarse adjustment, do not make large corrections, turn azimuth screw 1/4 turn or less.

5. Place the PLAY switch in 4ch. position.
6. Connect the test equipment as shown in figure 7-6.
7. Play a 7.5 kHz signal and adjust the azimuth screw until the oscilloscope shows that the signals are less than 45° in phase.
8. Secure the screw with a drop of LOCTITE.

SPECIFIED OUTPUT LEVEL SET

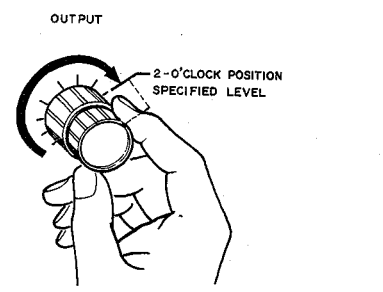
NOTE

Connect a 10 kΩ load to the OUTPUT jacks when not using TEAC M-826A (0 dB = 0.775V) output meter.

1. Place the OUTPUT switch in TAPE position.
2. Turn the OUTPUT controls fully clockwise.
3. Apply a 400 Hz signal at operating reference level (1% of the THD level).
4. Adjust FRONT VR-201,VR-202, REAR VR-203,VR-204 to obtain a specified output level of -2 dB at OUTPUT jacks.
5. Retard output controls to obtain a level of approximately -8 dB at LINE OUT jacks.
6. Align the reference marks of the 4 OUTPUT controls so that they are positioned alike. This will be at approximately the two o'clock position.

IMPORTANT

This is the specified output level set. Do not disturb this setting until the remaining adjustments have been completed.



7. Readjust FRONT VR-201/202, REAR VR-203/204 for a -8 dB output level at each OUTPUT jack.

VU METER CALIBRATION

1. While playing the 400 Hz tone (1% THD) in section 1 of the test tape.
2. With MONITOR switch in FRONT position, OUTPUT switch at TAPE position, adjust VR-205 for a reading of 0 VU on the VU meters.
3. With MONITOR switch in REAR position.
   Adjust VR-206 as in FRONT position. (±1 dB)

FREQUENCY RESPONSE

1. Place TAPE speed switch in HIGH position.
2. Thread a TEAC test tape YTT-1003 on the unit.
3. Compare the readings obtained on the level meter with the response limits given in figure 7-3.
4. If adjustment is required, adjust FRONT VR-101/102, REAR VR-103/104 at 7-1/2 ips speed.
5. Place TAPE speed switch in low (3-3/4 ips) position. Adjust as above.

* Forward and reverse playback frequency response should be identical.

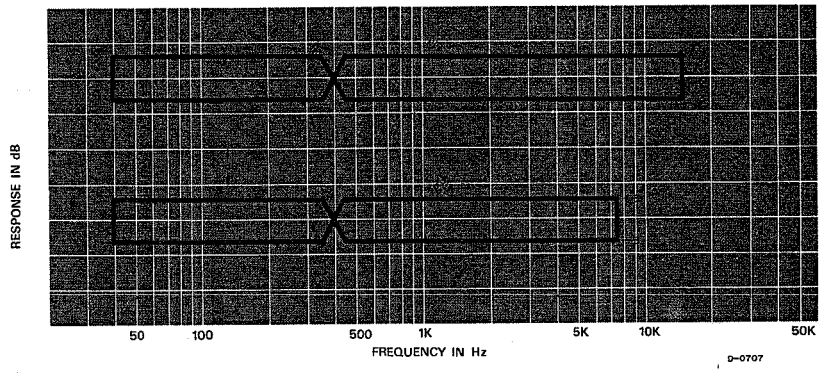


Fig. 7-3 Frequency Response Limits -Playback-

LEVEL VARIATION

Using Scotch 203 test tape, recorded at the specified level setting, with bias control in high position should not exceed 0.5 dB at 400 Hz, 1 dB at 50 Hz∿15 kHz (at either speed).

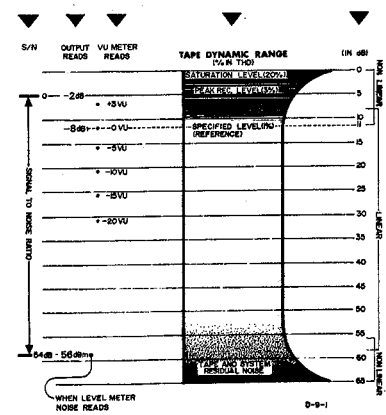
SIGNAL TO NOISE RATIO

IMPORTANT

Output control should be at specified output level.
The signal to noise ratio must meet factory standards.
The values given are obtained using an unweighted level meter while the supply and take up motors are running.
The values are with reference to a 3% THD level.

1. Thread a tape on the unit, leaving the tape outside the capstan and pinch roller.
2. Place the unit in the PLAY mode (▶) (the tape will not move).
3. The level meter connected to the OUTPUT jacks should indicate -56 dB or less.
4. This corresponds to a signal to noise ratio of 48 dB(difference between residual noise -56 dB and specified output level -8 dB for 1% THD).
   For a 3% THD signal to noise ratio, 6 dB is added, giving 54 dB(3% THD is 6 dB above 1% THD level).

* Speed for 7-1/2ips, 3-3/4ips 45 dB or higher.



Signal/Noise Computation

MONITOR PERFORMANCE

The following section is applicable only to the TEAC A-2520.

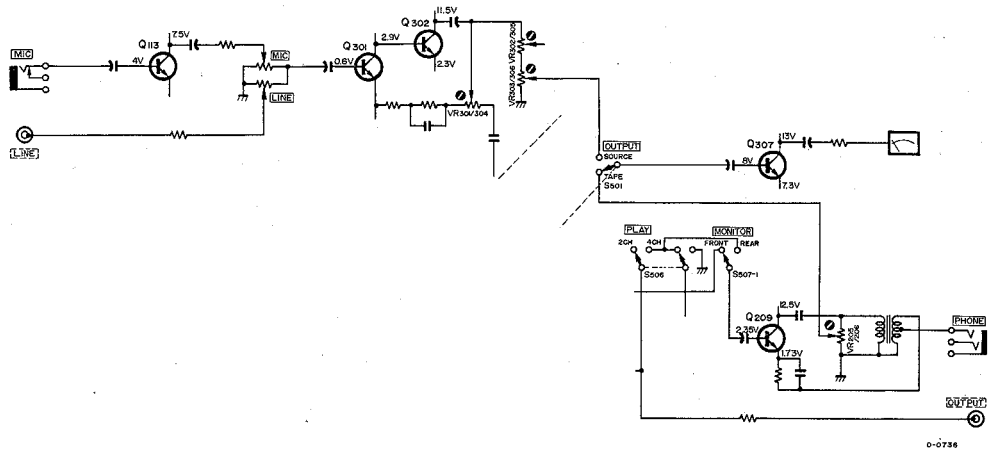


Fig. 7-4 Simplified Diagram -Monitor-

LEVEL SET

1. Connect an AF oscillator to the LINE IN jack.
2. Place OUTPUT switch in SOURCE position.
3. Apply a 400 Hz signal -18 dB at LINE IN jack.
4. LINE controls fully clockwise.
5. Adjust VR-301,VR-304 to obtain a specified output level of -8 dB at OUTPUT jacks.

VU METER CALIBRATION

OUTPUT controls at specified output level.

1. With OUTPUT switch in SOURCE position, MONITOR switch at FRONT, apply a 400 Hz signal at -8 dB to LINE IN jacks.
2. Adjust VR-303,VR-306 for 0 VU on the VU meters.

RECORD PERFORMANCE

Before making any adjustments on the record amplifier, be sure that all tests in the HEAD ALIGNMENT, PLAYBACK and MONITOR PERFORMANCE sections have been accomplished and that all adjustments are correct.

Optimum recording performance(bias levels, recording levels and frequency response) is dependent upon tape characteristics.
The TEAC A-2520 is factory set for Scotch type 203 or 150 tape.
Service data is based upon the use of Scotch 203/150 or equivalent tape.

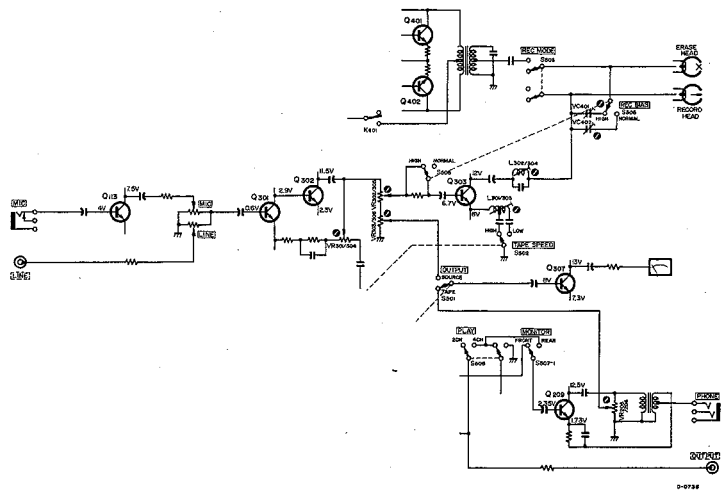
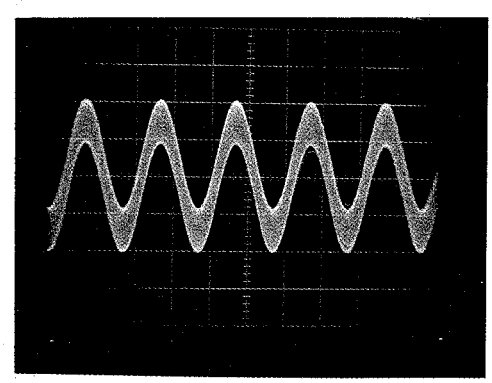


Fig. 7-5 Simplified Diagram -Record-

BIAS TRAP ADJUSTMENT

NOTE
The bias trap tank circuit keeps the bias signal from reaching the record and monitor amplifier and under normal no signal conditions, voltage should not be present at the OUTPUT jack.

1. Thread a blank tape or block tension arm in on position.
2. Place the REC BIAS switch to HIGH position.
3. Connect a VTVM or oscilloscope to junction of L-302 and C-309.
4. Adjust L-302 for a minimum reading.
5. Connect a VTVM or oscilloscope to junction of L-304 and C-318.
6. Adjust L-304 for a minimum reading.



Bias Leakage

BIAS ADJUSTMENT

Perform BIAS TRAP ADJUSTMENT before proceeding.

NOTE

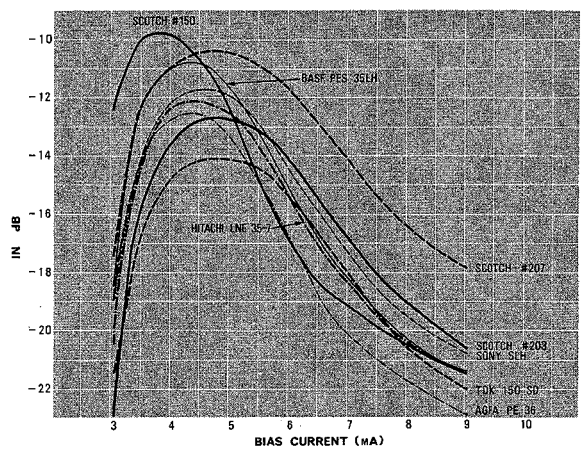
These adjustment are only made at 7-1/2 ips tape speed. The bias oscillator frequency is 100±10kHz.

HIGH position

1. Thread record test tape Scotch 203 on the unit.
2. Place the REC BIAS switch to HIGH and place the unit in the record mode.
3. Place the OUTPUT switch in the TAPE position.
4. Adjust capacitor VC-401 and VC-403 for a peak on the level meter.
5. Turn the capacitors clockwise until a decrease of 0.5 dB is obtained.

NORMAL position

6. Thread record test tape Scotch 150 on the unit.
7. Place the REC BIAS switch to NORMAL and place the unit in the record mode.
8. Adjust capacitor VC-402 and VC-404 as in HIGH position.



Bias Current Characteristic

RECORD HEAD ADJUSTMENT

Coarse Adjustment

NOTE

The effect of turning the azimuth screw will not immediately register on the level meter. A slight delay will be noticed. Therefore, the screw must be rotated slightly, and then pause to see the effect.

1. Connect a level meter to the OUTPUT jack and an AF oscillator to the LINE IN jack.
2. Place the OUTPUT switch to SOURCE and adjust the AF oscillator to obtain a signal of 15 dB below the specified output level. (The level meter will indicate -23 dB.)
3. Make certain that the LINE control is at the specified input level position, then set the AF oscillator to 10 kHz.
4. Thread a record test tape on the unit.
5. Place the OUTPUT switch in the TAPE position.
6. Adjust the azimuth screw for maximum indication on the level meter.

Fine Adjustment

NOTE

It is absolutely essential to accomplish the coarse adjustment before using this method, to avoid phase error larger than 45°.

7. Connect the test equipment as shown below.
8. Apply a 7.5 kHz signal at -23 dB to the LINE IN jacks and record this signal.
9. Carefully adjust the azimuth screw until the oscilloscope shows the signal to be in phase.
10. Secure the screw with a drop of LOCTITE.

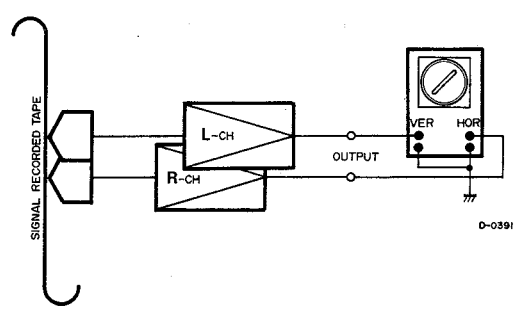


Fig. 7-6 Fine Adjustment Set-Up
-Head Azimuth-

RECORD LEVEL SET

The OUTPUT controls must be at the specified output level position (-8 dB at OUTPUT jacks).

1. Apply a 400 Hz signal at -8 dB to the LINE IN jack.
2. Thread record test tape Scotch 203 on the unit, then set the REC BIAS switch to HIGH position.
3. Place the unit in the stereo record mode with the OUTPUT switch in the TAPE positions, LINE controls fully clockwise.
4. Adjust VR-302 and VR-305 for -8 dB signal at OUTPUT jacks.

OVERALL FREQUENCY RESPONSE

HIGH position

1. Thread a blank Scotch 203 tape on unit, place REC BIAS switch at HIGH, tape speed at H (high).
2. Apply a signal swept from 50 Hz to 15 kHz at -23 dB to LINE IN jacks and record it on the test tape.
3. Adjust L-301/303 for best response.
4. Repeat above procedures for 3-3/4 ips using a signal swept from 50 Hz to 7.5 kHz.

NORMAL position

1. Thread a blank Scotch 150 tape on the unit. Place REC BIAS switch at NORMAL position, tape speed at H (high).
2. Repeat over all response check at both speeds.

NOTE

If further adjustment is required, C-306/315 must be changed, if the high end response is too high, a lower value capacitor must be installed.

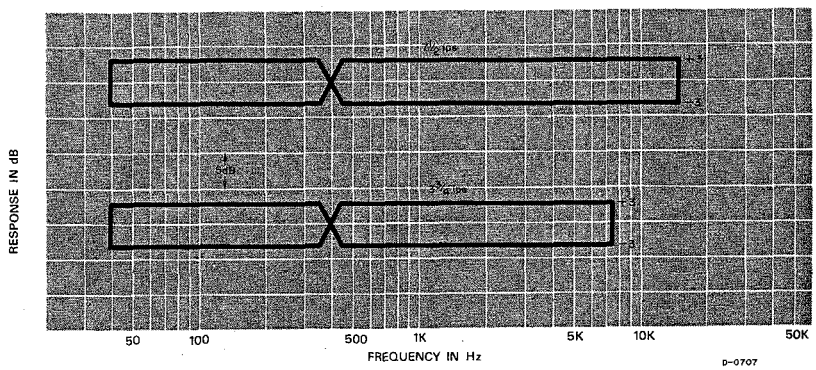


Fig. 7-7 Frequency Response Limits -Record-

LUBRICATION

Under normal conditions the unit will not require lubrication. Most of the bearings and bushings are of the oilless type. Since there are many rubber parts in the transport mechanism, excessive or improper lubrication could cause problems. If lubrication is required, the following points should be lubricated:

Capstan bushing, pinch roller shaft ..... 1 drop
Motor ..... 1 - 2 drops in the plastic tubes

Parts to be lubricated should be cleaned and old oil and dirt removed before relubricating. Observe instructions as to type of oil, points to be lubricating.

Motors should be lubricated immediately after use while still warm. After oiling motors keep the unit in the horizontal position for 2 - 3 hours to allow thorough absorption of oil.

VENTILATION

During use the face plate of the A-2520/2420 may become quite warm to the touch, this entirely normal.
AS long as the air vents in the rear plate are unobstructed, the unit will not overheat.
However, if the unit is placed snugly against a wall, or free air passage is prevented, overheating and possible damage may occur.

9.TROUBLE SHOOTING

NOTE

About 50% of the units that are returned for repair do not function properly due to poor connections, dirty heads, poor tape, or improper operation.
The following guide lists specific difficulties that could occur in the A-2520/2420
Several possible causes are listed for each malfunction.
Visually inspect the unit for any damage such as broken or burned components or wiring, loose connections, etc.

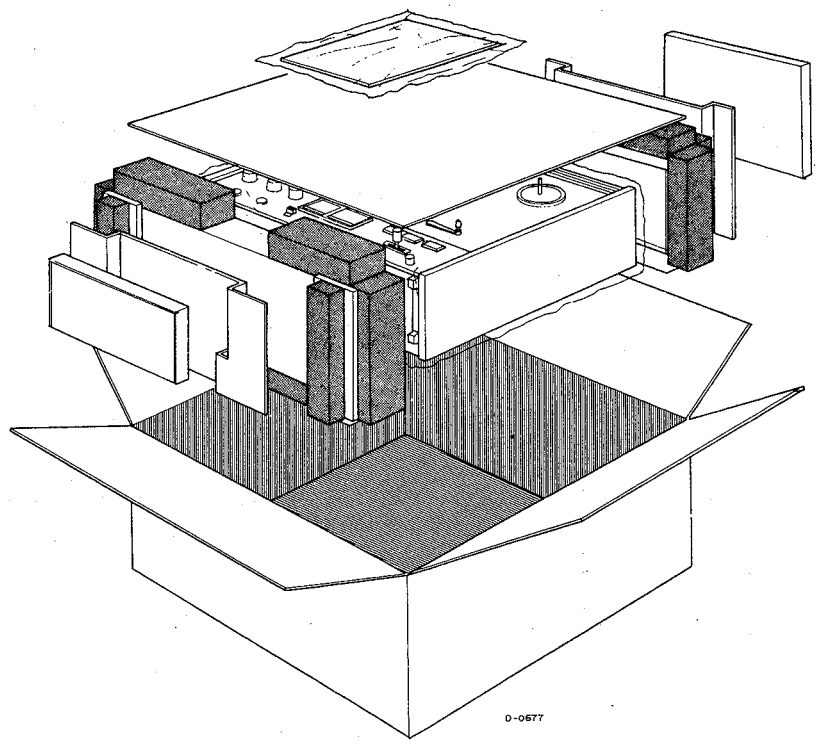
MALFUNCTION	POSSIBLE SOURCE OF TROUBLE	CORRECTIVE PROCEDURE
Capstan fails to turn	Belt off slipping, line fuse(F-1), auto-shut off switch(SW-2), speed select switch(SW-8).	Refer to schematic diagram and repair or replace the defective components.
Pinch roller fails to contact capstan in play mode	AC voltage, position, stop switch(SW-3), rewind relay (K-1), capstan solenoid.	The normal DC resistance of the capstan solenoid is 1.3k ohms. Refer to schematic diagram and repair or replace the defective components.
Right reel does not rotate in the play mode	Resistor(R-2), rewind relay (K-1), capacitor(C-4)	Refer to schematic diagram and repair or replace the defective components.
Left reel does not rotate in play mode	Resistor(R-3), rewind relay (K-1), capacitor(C-5)	Refer to schematic diagram and repair or replace the defective components.
Left reel operates with low torque	Resistor(R-6), tension switch	Repair or replace defective components.
Both reel motors fail to operate	Operating relay(K-1)	Clean contacts on(K-1) or replace relay.
Recorder does not operate in forward play	Remote control jumper plug missing or loose, stop switch(SW-8), operate relay (K-1), brake solenoid, diode(DC 24V)	Normal DC resistance of the brake solenoid is 1.3k ohms. Refer to schematic diagram and repair or replace the defective components.
Playback noise or hum	Faulty connections, head selector switch, faulty playback head, faulty amplifier	Repair or replace defective components.

MALFUNCTION	POSSIBLE SOURCE OF TROUBLE	CORRECTIVE PROCEDURE
Noise or hum during record	Magnetized head, faulty connections, mic level set to maximum, faulty record amplifier, record relay (K-401).	Demagnetize and clean head, repair or replace defective components.
Wow & flutter	Defective tape, dirty or defective pinch roller, oily or defective belt, reel motor tension.	Clean or replace defective components. Adjust motor tension.
Incorrect tape speed	Drive belt in wrong position. Incorrect pinch roller pressure.	Reposition drive belt. Adjust pinch roller pressure.
Brakes do not release	Defective brake solenoid	The D.C. resistance of the brake solenoid should be 1.3K ohms. Replace solenoid.
Fast forward or rewind mode inoperative	Rewind relay(K-3)	Refer to schematic diagram and repair or replace the defective components.
No record and/or no erase	Record head dirty, erase head dirty, operate relay (K-1), record switch(SW-6), record relay(K-401), record amplifier, bias oscillator, record head, erase head.	Refer to schematic diagram and repair or replace the defective components. For record amplifier troubleshooting refer to voltage chart.
No playback	Playback head dirty, amplifier to deck connections, monitor switch(SW-501), playback amplifier.	Refer to playback amplifier voltage chart.

10.PACKING FOR SHIPMENT

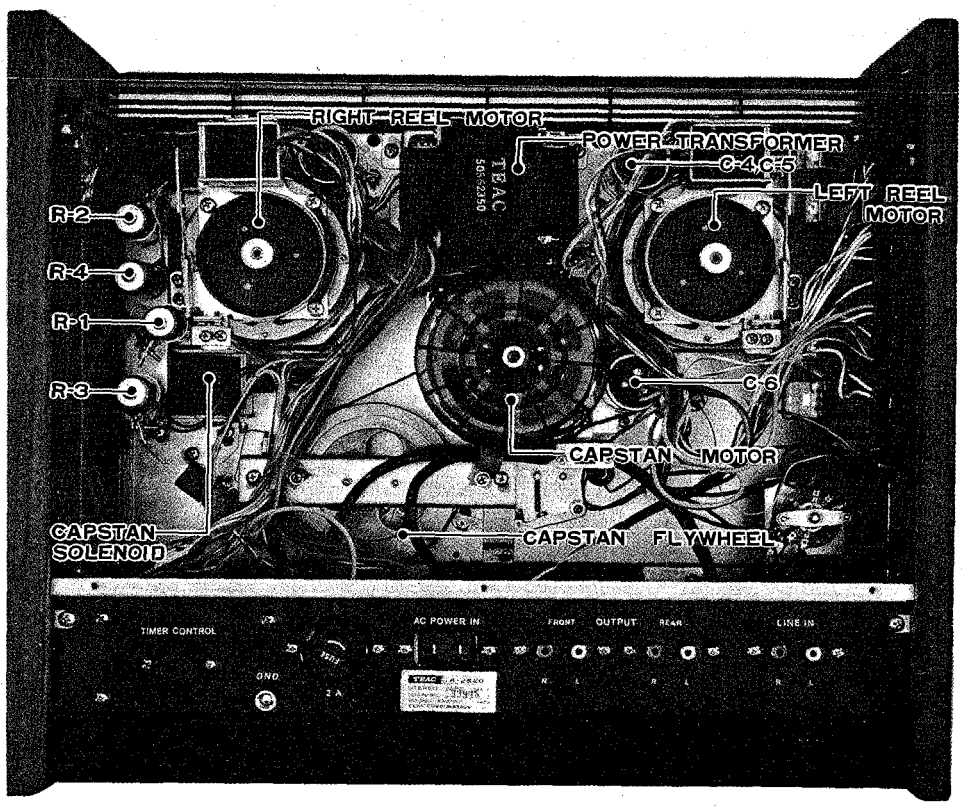
SHIPPING INSTRUCTIONS

If the unit is to be sent back to the TEAC factory (service department) for repair, carefully pack as shown below.



A-2420/2520

TAPE TRANSPORT PARTS LOCATION



2520/2420 REAR

TEAC®

A-2520

STEREO TAPE DECK

PARTS LIST

REPLACEMENT INFORMATION

Replacement parts are available through your nearest TEAC dealer or directly from the TEAC office.
Changes are constantly being made to make TEAC products better and more reliable.
Therefore, when ordering parts, always include the following information:

MODEL *SERIAL NO.* *REF.NO.* *PARTS NO.* *DESCRIPTION*

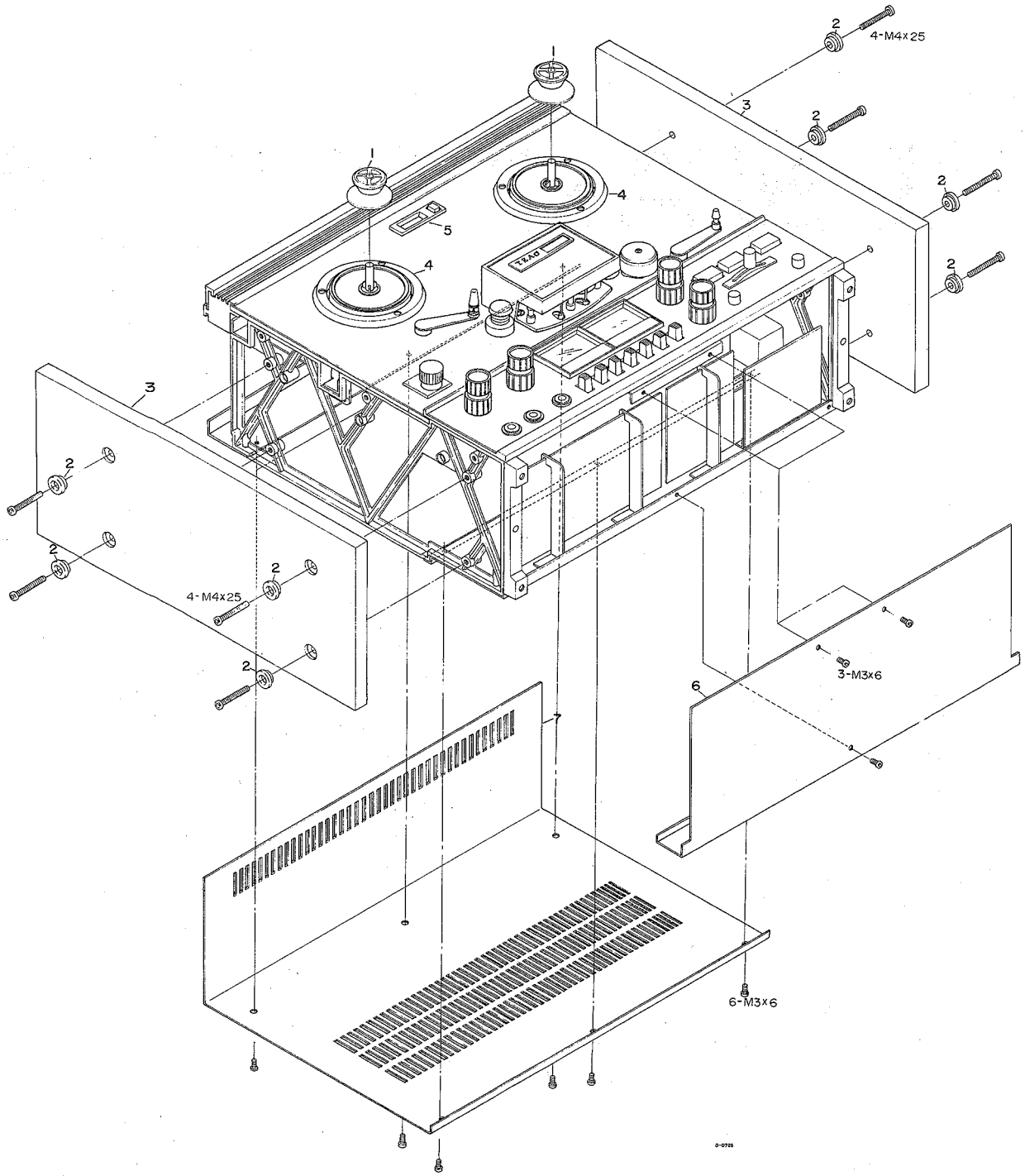
E-418

TEAC CORPORATION

EXPLODED VIEW 1

A-2520

TRIM PARTS

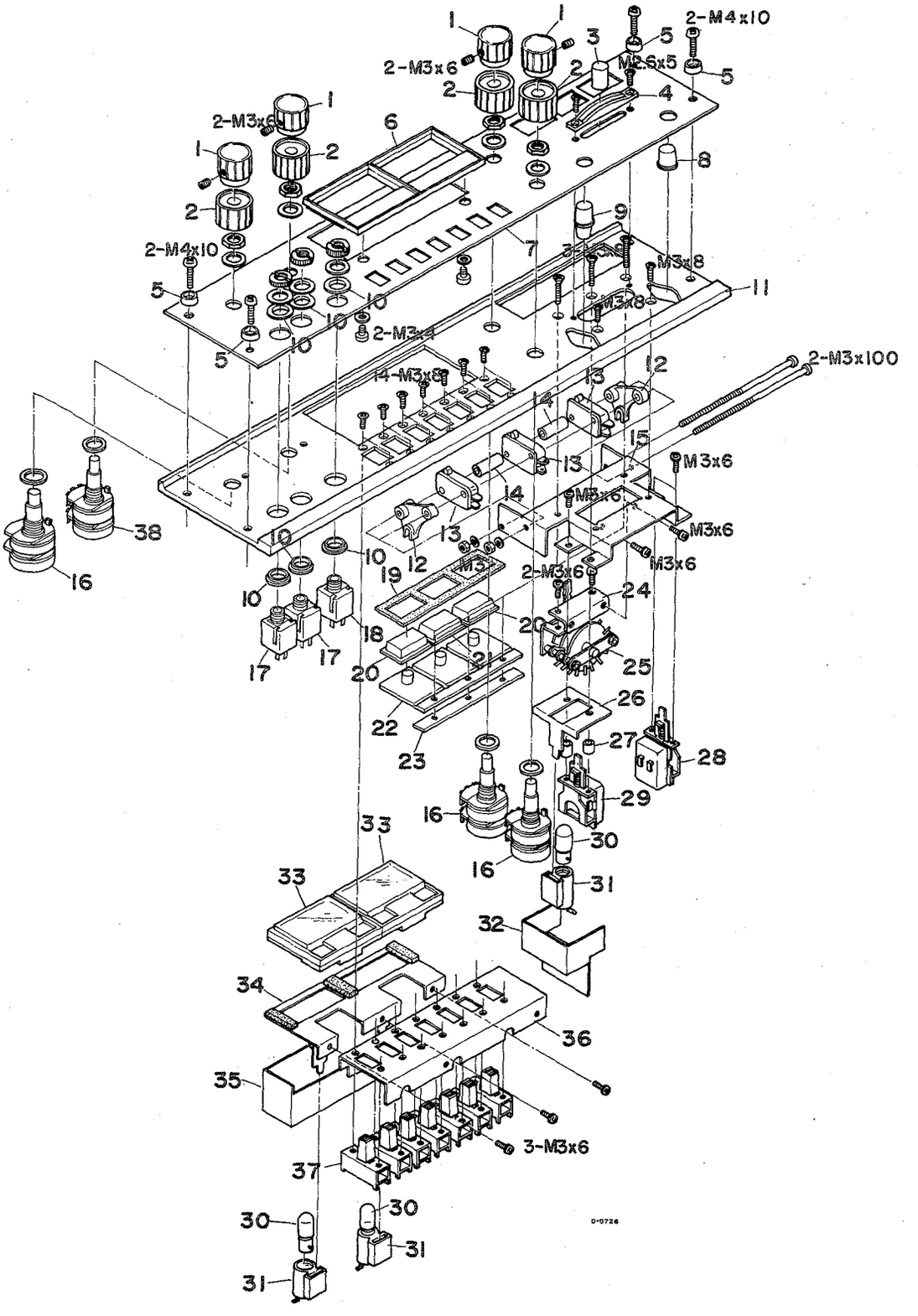


TRIM PARTS

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
1-1	50161580	Reel Holder			
1-2	50276930	Washer			
1-3	50288330	Wooden Plate			
1-4	50161940	Reel Protector			
1-5	50277020	Counter Escutcheon			
1-6	50288080	Bottom Cover			
1-7	50288290	Rear Cover Assy			

EXPLODED VIEW 2
A-2520

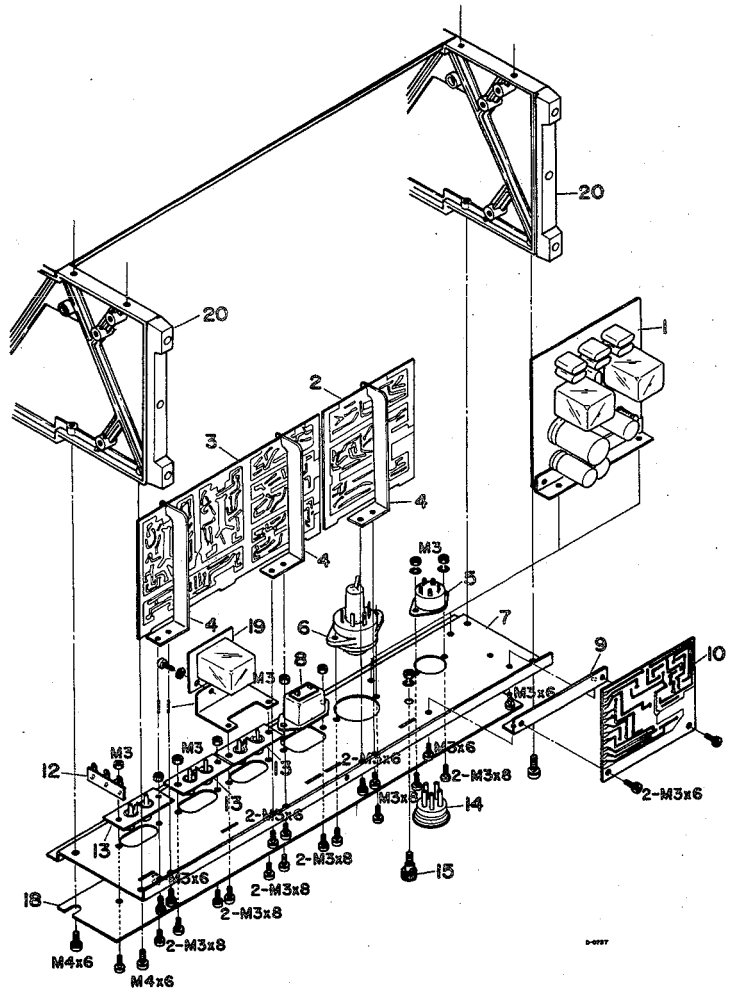
CONTROL PANEL



CONTROL PANEL

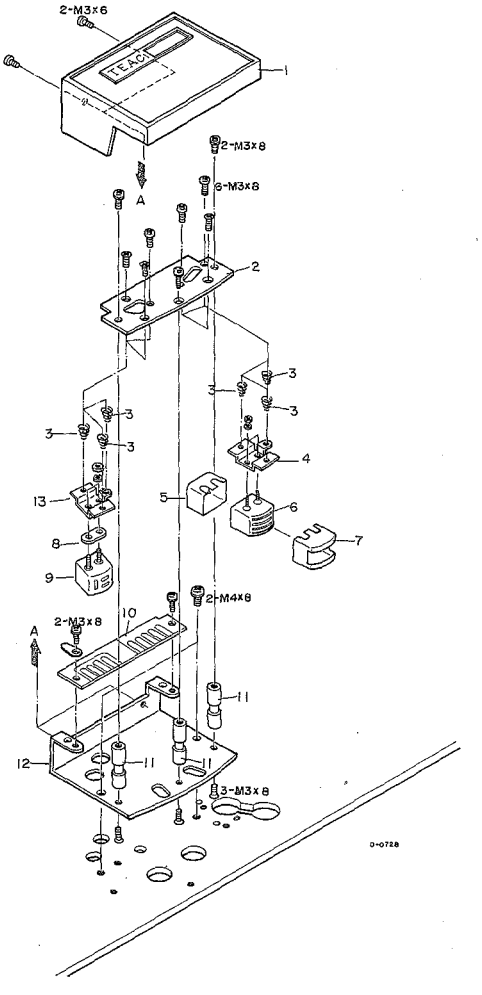
REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
2- 1	50253390	Knob (Upper)			
2- 2	50253400	Knob (Lower)			
2- 3	50253470	Knob (D)			
2- 4	50449900	Lever Switch Cover			
2- 5	50277111	Trim Washer			
2- 6	50279830	Meter Escutcheon			
2- 7	50236160	Amp Trim Panel			
2- 8	50253120	Push Button			
2- 9	50235950	Push Button (Record)			
2-10	50272620	Insulator Washer			
2-11	50236171	Amp Panel			
2-12	50277540	Base Plate Holder			
2-13	50446090	Micro Switch			
2-14	50241121	Control Collar			
2-15	50277782	Control Base Plate			
2-16	50537100	Dual Potentiometer 10kΩA × 2			
2-17	50430240	Single Jack			
2-18	50432450	3P Jack			
2-19	50277240	Rubber Plate Collar			
2-20	50253210	Operation Button			
2-21	50253200	Operation Button Stop			
2-22	50253113	Push Button Base			
2-23	50277010	Control Plate			
2-24	50277771	Rotary SW Mount Plate			
2-25	50442350	Rotary Switch (Lever)			
2-26	50235960	Lamp Holder			
2-27	50235970	Record Switch Spacer			
2-28	50443210	Push Switch (Lock)			
2-29	50443410	Push Switch (Non Lock)			
2-30	50414510	8V Pilot Lamp			
2-31	50415250	Pilot Lamp Socket			
2-32	50236140	Shield Plate (Rec Lamp)			
2-33	50581331	VU Meter			
2-34	50236080	Meter Retainer Assy			
2-35	50236140	Shield Plate (VU Meter)			
2-36	50236110	Slide SW Mount Plate			
2-37	50440000	Slide Switch			
2-38	50537090	Dual Potentiometer 100kΩA × 2			

REAR PANEL



REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
3- 1	50490230	Control PC Board Assy			
3- 2	50505210	Rec. and Meter Amp PC Board Assy			
3- 3	50489930	Playback and Mic Amp PC Board Assy			
3- 4	50233760	PC Board Plate			
3- 5	50434970	5P Socket			
3- 6	50412143	Voltage Selector with Fuse			
3- 7	50235930	Amp Chassis			
3- 8	50431050	AC Socket			
3- 9	50330950	L Bracket (C)			
3-10	50505220	Bias Oscillator PC Board Assy			
3-11	50235940	Base Plate Holder B			
3-12	50452060	Terminal Strip 1L-2P			
3-13	50434631	2P Pin Jack			
3-14	50432910	5P Plug			
3-15	50454071	Ground Terminal			
3-18	50235920	Connector Plate			
3-19	50483340	Relay PC Board			
3-20	50277980	Case Leg			

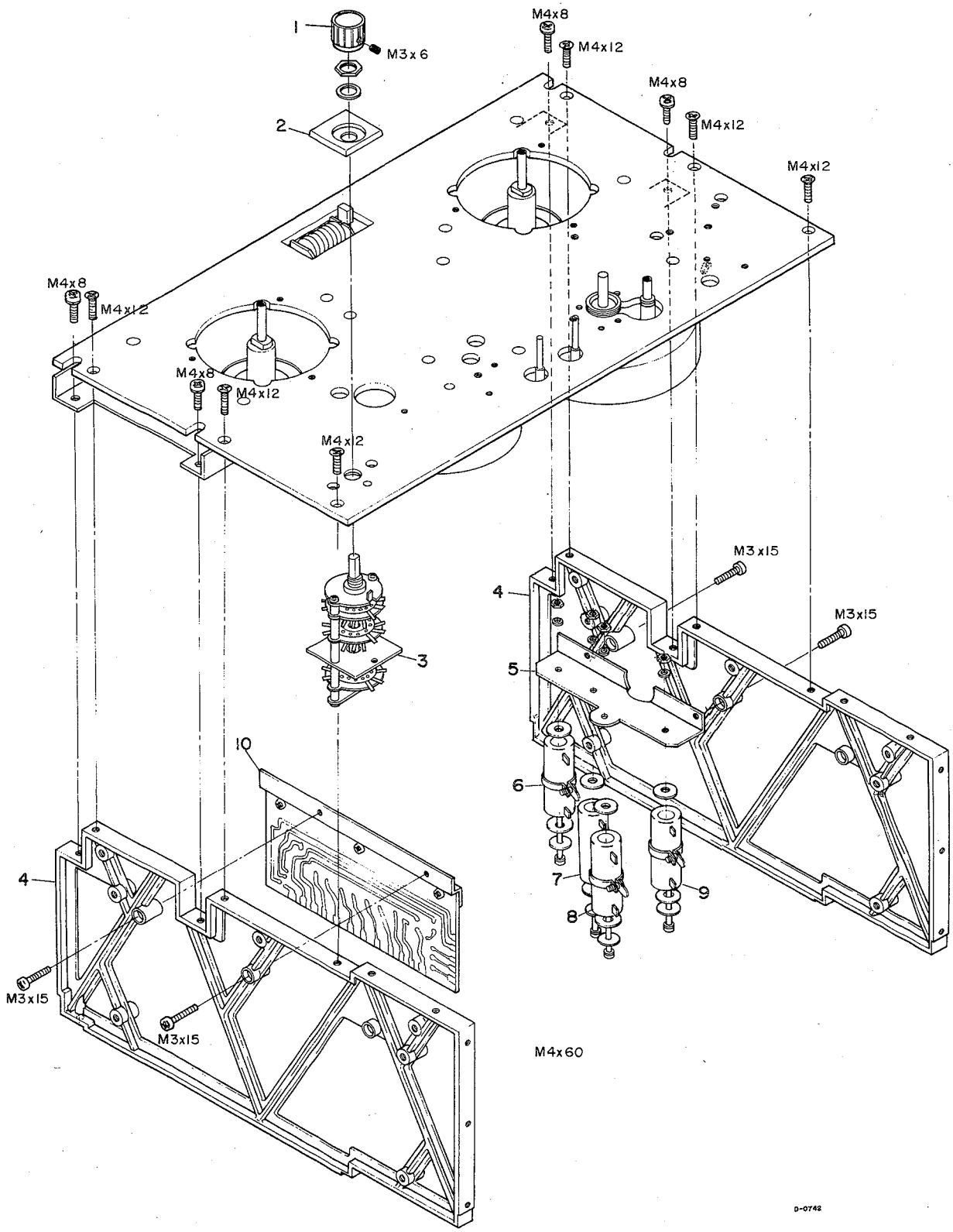
HEAD ASSY



REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
	50136170	Head Assy			
4- 1	50136130	Head Housing			
	50136140	Emblem (A-2520)			
4- 2	50134400	Head Angle Plate			
4- 3	50220500	Spring			
4- 4	50134370	Head Mount Plate			
4- 5	50133900	Shield Case (B)			
4- 6	50664310	Playback Head 4T-4CH(B)			
4- 7	50133891	Shield Case (A)			
4- 8	50134390	E/R Head Spacer			
4- 9	50663410	E/R Head 4T-2CH			
4-10	50482421	PC Board (Head)			
4-11	50182672	Guide Pin			
4-12	50136180	Head Plate			
4-13	50134420	E/R Head Mount Plate			

EXPLODED VIEW 5
A-2520

DECK PANEL



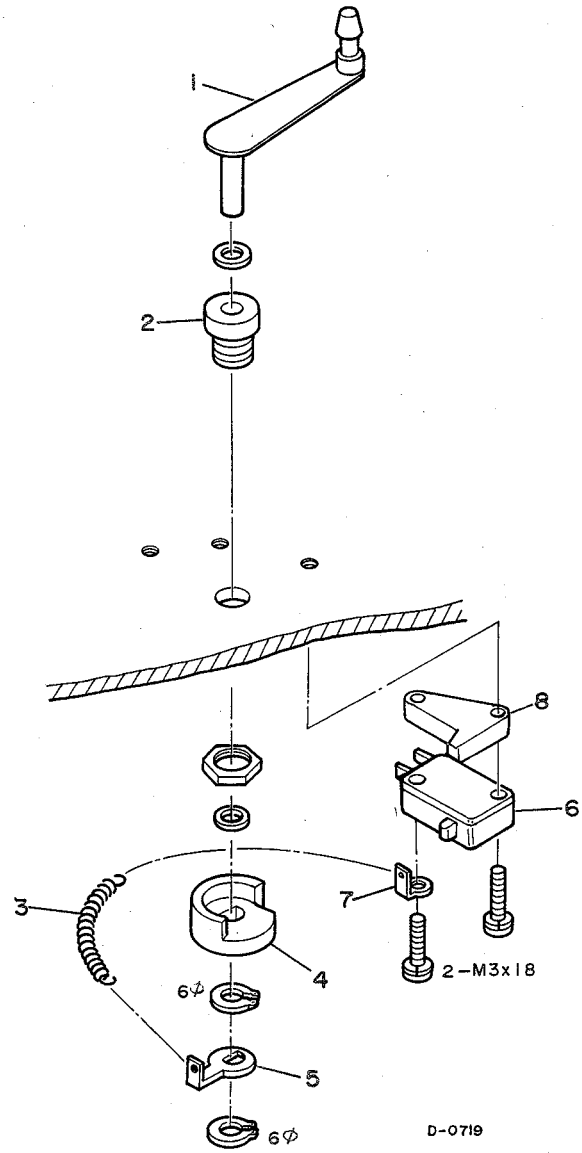
DECK PANEL

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
5- 1	50253390	Knob (Upper)			
5- 2	50263171	Tape Speed Name Plate			
5- 3	50442700	Rotary Switch			
5- 4	50112712	Side Frame			
5- 5	50330110	Resistor Mount Plate			
5- 6	50524321	Wire Wound Resistor 500Ω 20HA			
5- 7	50522190	Wire Wound Resistor 200Ω 20H			
5- 8	50522210	Wire Wound Resistor 50Ω 20HA			
5- 9	50524200	Wire Wound Resistor 100Ω 20HA			
5-10	50489950	Reverse PC Board Assy			

EXPLODED VIEW AND PARTS LIST 6

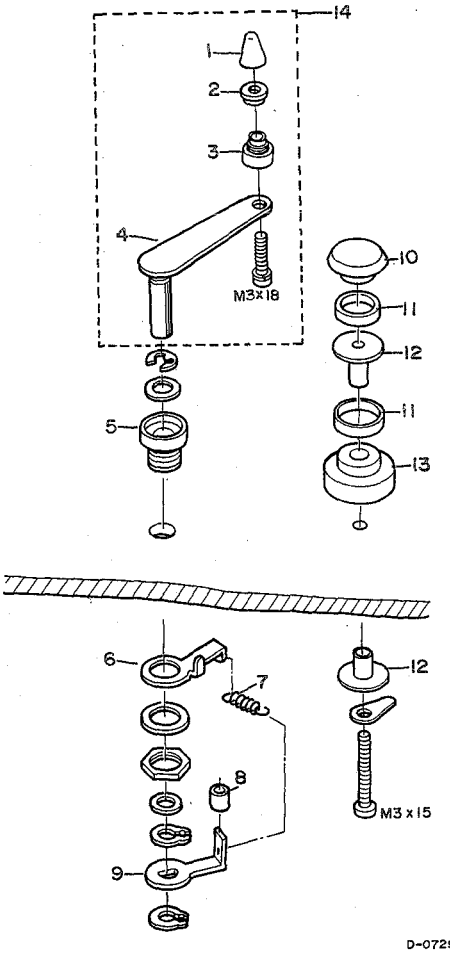
A-2520/A-2420

RIGHT TENSION ARM



REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
6-1	50180432	Tension Arm Assy (Right)			
6-2	50182701	Arm Holder			
6-3	50221122	Spring			
6-4	50182990	Tension Arm Drum			
6-5	50276860	Spring Hang (Right)			
6-6	50446180	Micro Switch			
6-7	50286860	Spring Hang			
6-8	50182730	Limit Stop (Right)			

LEFT TENSION ARM

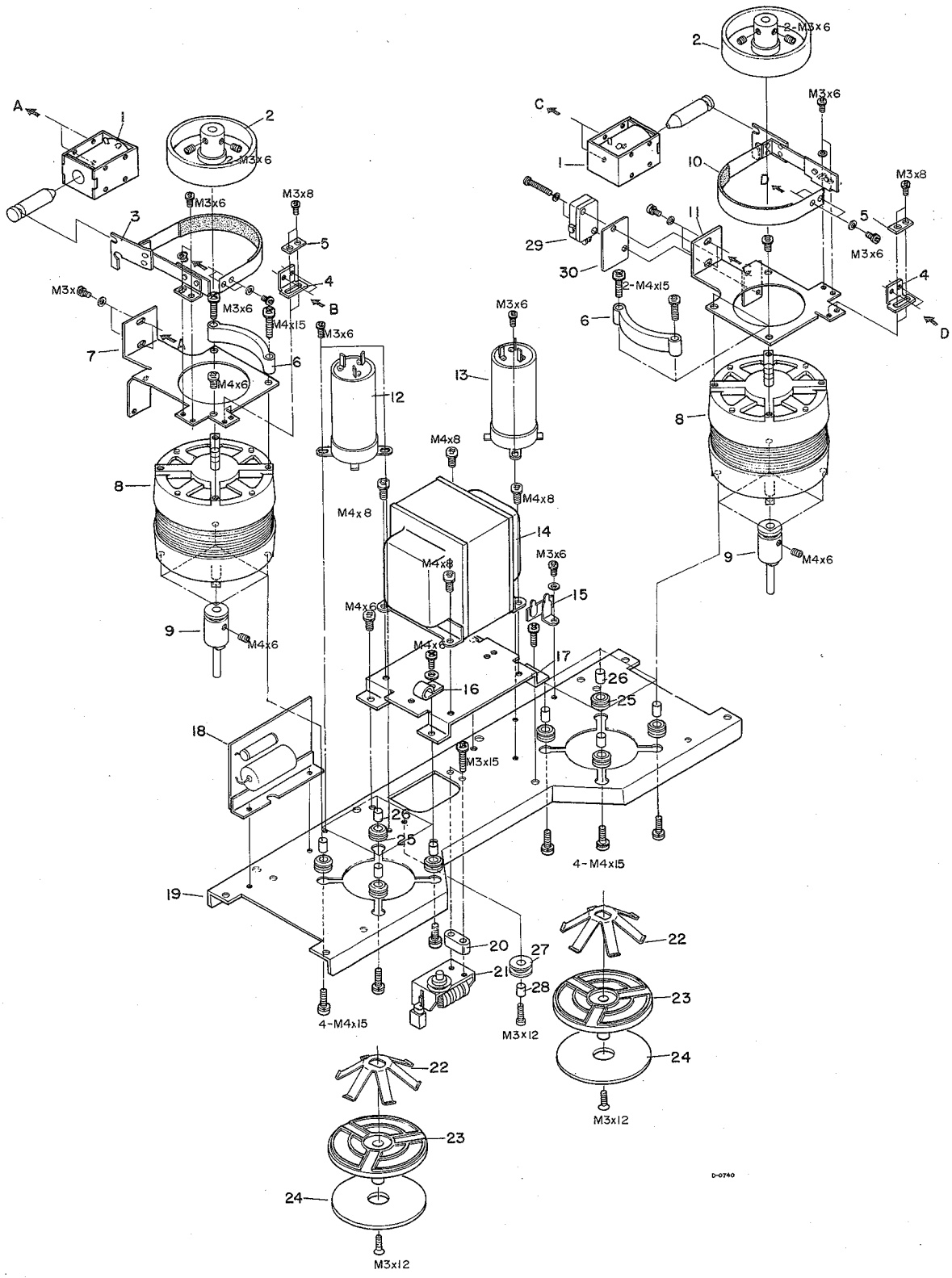


REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
7- 1	50134360	Guide Cap			
7- 2	50182780	Guide C			
7- 3	50182760	Guide D			
7- 4	50182821	Tension Arm Assy (Left)			
	50183040	Arm PC Board			
7- 5	50182800	Arm Holder B			
7- 6	50276870	Spring Hanger (Left)			
7- 7	50221110	Spring (B)			
7- 8	50276990	Rubber Collar			
7- 9	50182750	Limit Stop (Left)			
7-10	50123911	Guide Ling Cap			
7-11	50183871	Guide Ring			
7-12	50183860	Sensing Post			
7-13	50183880	Guide Ring Base			
7-14	50183780	Left Tension Arm Assy			

EXPLODED VIEW 8

A-2520/A-2420

REEL MOTOR ASSY



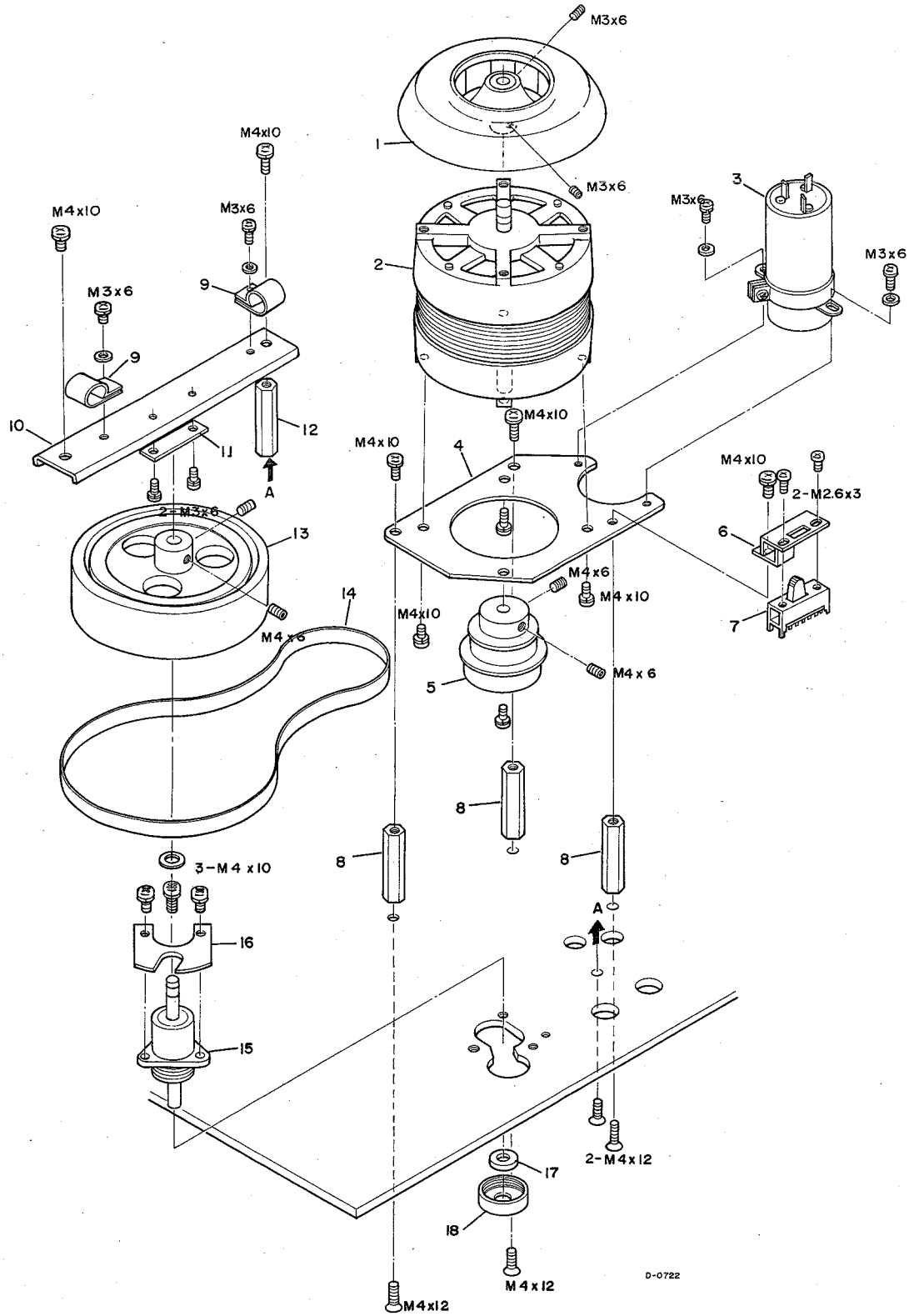
REEL MOTOR ASSY

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
8- 1	50616370	Solenoid			
8- 2	50172831	Brake Drum			
8- 3	50170143	Brake Band Assy B			
8- 4	50170160	Band Mount Angle			
8- 5	50170150	Band Pressure			
8- 6	50172550	Brake Retainer			
8- 7	50172612	Brake Mount Plate (B)			
8- 8	50702251	Reel Motor			
8- 9	50162950	Reel Shaft B			
8-10	50170182	Brake Band Assy A			
8-11	50172602	Brake Mount Plate (A)			
8-12	50545660	MP Capacitor 3+1μF/AC 250V			
8-13	50545660	MP Capacitor 3+1μF/AC 250V			
8-14	50562350	Power Transformer (or 50562360)			
8-15	50452080	Terminal Strip 1L-1P			
8-16	50276280	Cord Pressure (Large)			
8-17	50233751	Power Transformer Mount Plate			
8-18	50500500	Rectifier PC Board Assy			
8-19	50233922	Motor Chassis			
8-20	50276950	Counter Spacer			
8-21	50585090	Tape Counter			
8-22	50163070	Height Adjust Spring			
8-23	50161981	Reel Table			
8-24	50820351	Reel Table Cover			
8-25	50162960	Rubber Cushion Ring B			
8-26	50162760	Rubber Cushion Spacer			
8-27	50162940	Counter Relay Pulley			
8-28	50163100	Pulley Shaft			
8-29	50446180	Micro Switch V-1A44			
8-30	50173530	Insulator Plate			

EXPLODED VIEW 9

A-2520/A-2420

CAPSTAN DRIVE ASSY

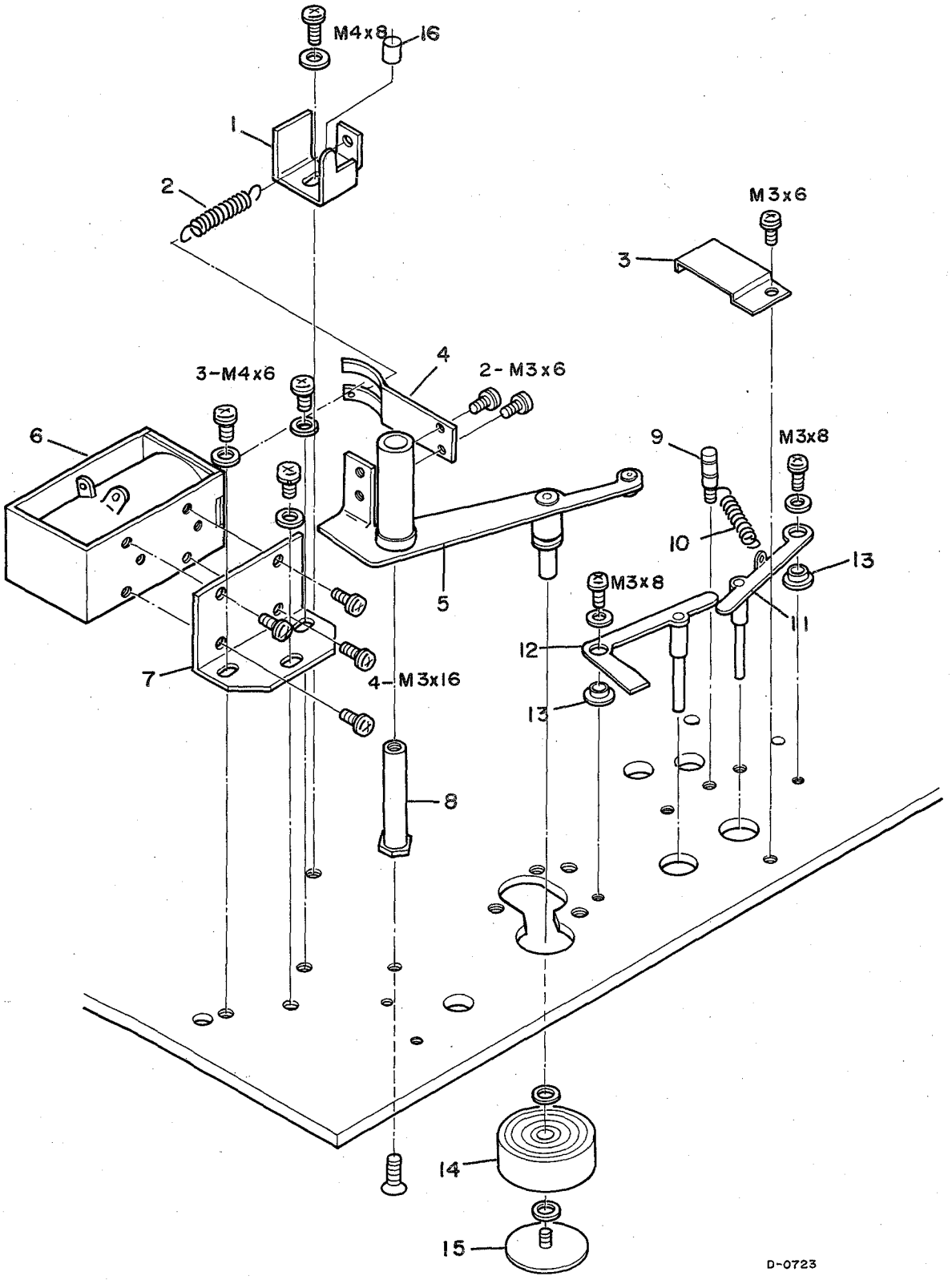


CAPSTAN DRIVE ASSY

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
9- 1	50123980	Fan			
9- 2	50701343	Capstan Motor			
9- 3	50545650	MP Capacitor 2+0.8μF/250V			
9- 4	50123870	Motor Mount Plate			
9- 5	50124002	Motor Pulley			
9- 6	50276910	Slide SW Mount Plate			
9- 7	50444170	Slide Switch			
9- 8	50123850	Pole (Capstan)			
9- 9	50276290	Cord Pressure			
9-10	50277151	Thrust Angle			
9-11	50277230	Thrust Plate			
9-12	50123860	Pole (Flywheel)			
9-13	50123801	Flywheel			
9-14	50123830	Capstan Belt			
9-15	50120440	Capstan Assy			
9-16	50141830	Holder Supporter			
9-17	50123900	Sponge Oiler			
9-18	50123971	Metalized Cap			

EXPLODED VIEW 10
A-2520/A-2420

LIFTER AND PINCH ROLLER



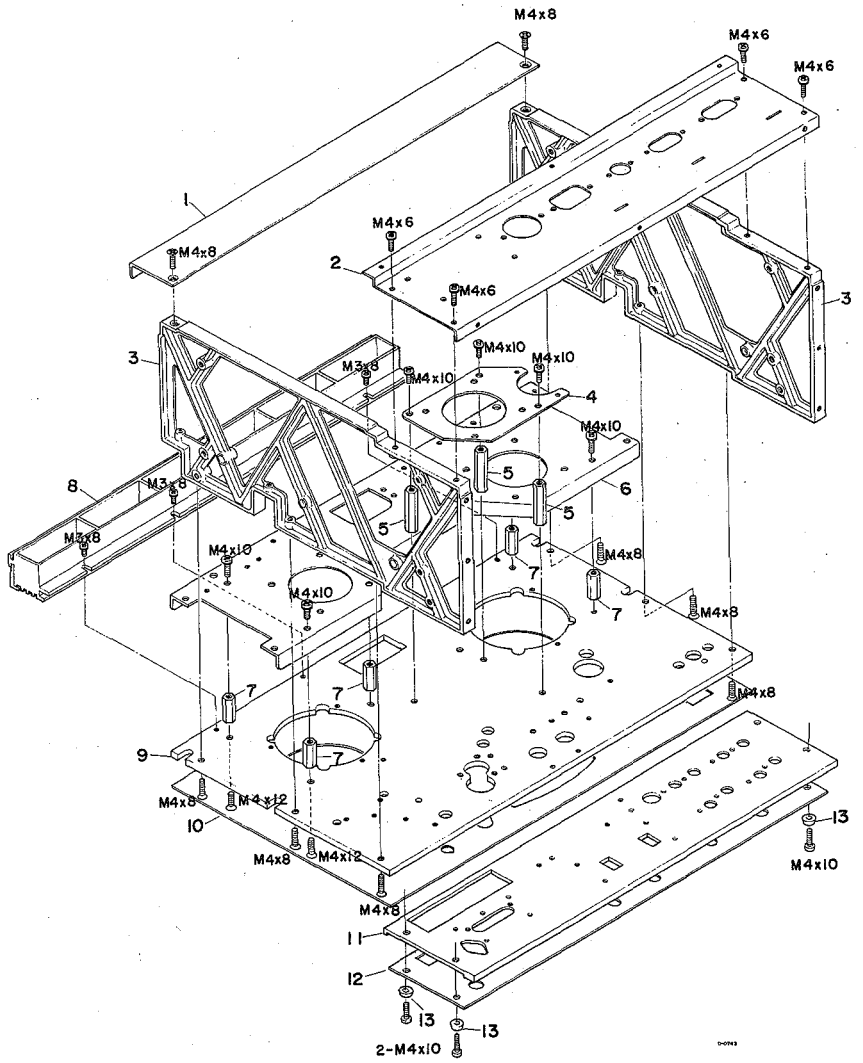
LIFTER AND PINCH ROLLER

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
10- 1	50141841	Pinch Roller Stopper			
10- 2	50220441	Return Spring			
10- 3	50152450	Lifter Angle			
10- 4	50221151	Pressure Spring			
10- 5	50140235	Pinch Roller Arm Assy			
10- 6	50616340	Solenoid			
10- 7	50277080	Solenoid Mount Plate			
10- 8	50141770	Roller Arm Shaft			
10- 9	50123140	Spring Angle Pin			
10-10	50221100	Spring (A)			
10-11	50150251	Lifter Arm (B) Assy			
10-12	50150241	Lifter Arm (A) Assy			
10-13	50152501	Lifter Arm Shaft			
10-14	50141750	Pinch Roller			
10-15	50141760	Pinch Roller Cap			
10-16	50275690	Rubber Cushion Ring			

EXPLODED VIEW AND PARTS LIST 11

A-2520/A-2420

MAIN CHASSIS



REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
11- 1	50235311	Cover Angle Plate			
11- 2	50235930	Amp Chassis			
11- 3	50112712	Side Frame			
11- 4	50123870	Motor Mount Plate			
11- 5	50123850	Pole (Capstan)			
11- 6	50233922	Motor Chassis			
11- 7	50161951	Pole (Reel Motor)			
11- 8	50112980	Top Grille Assy			
11- 9	50112674	Top Panel			
11-10	50112662	Face Panel			
11-11	50236171	Amp Panel			
11-12	50236150	Amp Trim Panel			
11-13	50277111	Trim Washer			

PRINTED CIRCUIT BOARD AND PARTS LIST

A-2520

REPLACEMENT INFORMATION

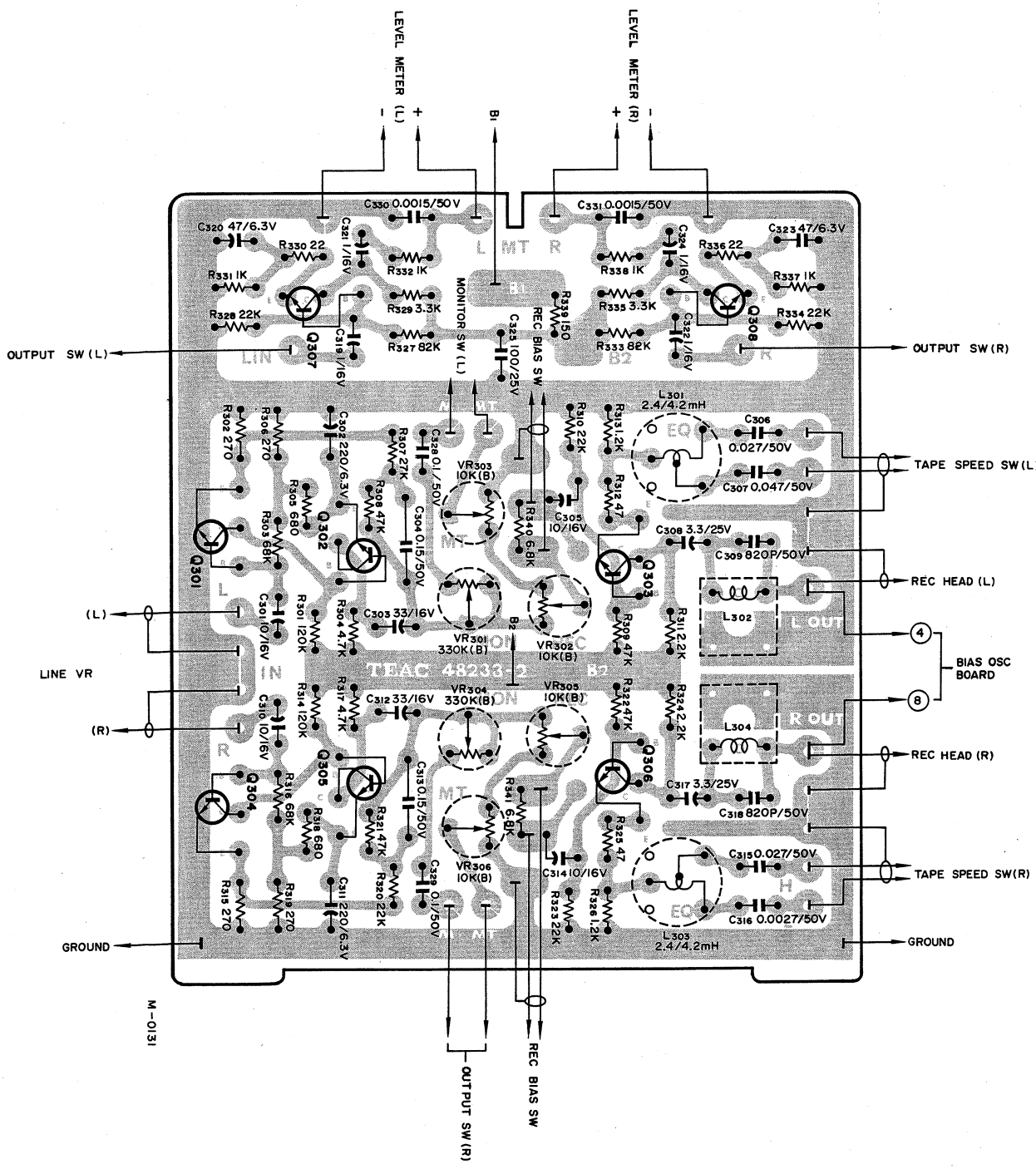
Replacement parts are available through your nearest TEAC dealer or directly from the TEAC office.
Changes are constantly being made to make TEAC products better and more reliable.
Therefore, when ordering parts, always include the following information:

MODEL *SERIAL NO.* *REF.NO.* *PARTS NO.* *DESCRIPTION*

TEAC CORPORATION

PC BOARD
A-2520

METER AND REC. EQ. AMPLIFIER

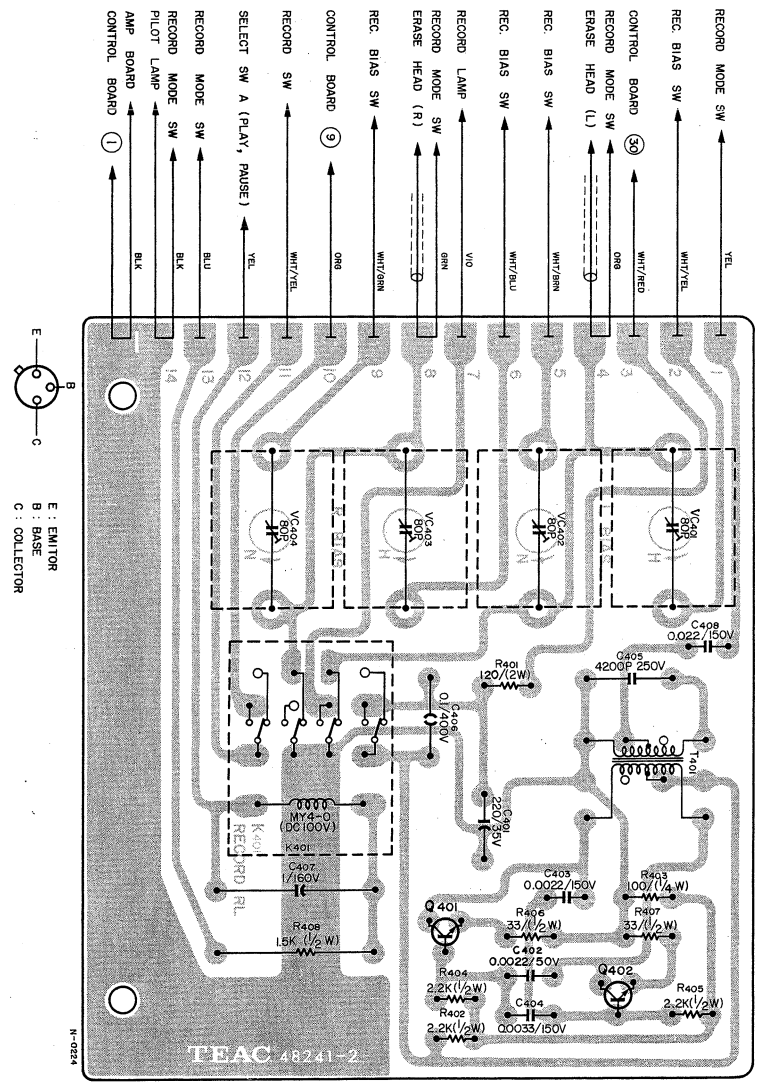


METER AND REC. EQ. AMPLIFIER

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
		SILICON TRANSISTORS			
Q301/304	50423870	2SC693-G			
Q302/305	50423830	2SC536-F			
Q303/306	50423830	2SC536-F			
Q307/308	50423830	2SC536-F			
		CARBON RESISTORS			
		ALL RESISTORS IN OHM, 10% TOLERANCE 1/4 WATT UNLESS OTHERWISE NOTED.			
R301/314	50515650	120k			
R302/315	50515270	270			
R303/316	50515620	68k			
R304/317	50515460	4.7k			
R305/318	50515320	680			
R306/319	50515270	270			
R307/320	50515540	22k			
R308/321	50515590	47k			
R309/322	50515590	47k			
R310/323	50515540	22k			
R311/324	50515380	2.2k			
R312/325	50515170	47			
R313/326	50515350	1.2k			
R327/333	50515630	82k			
R328/334	50515540	22k			
R329/335	50515410	3.3k			
R330/336	50515130	22			
R331/337	50515340	1k			
R332/338	50515340	1k			
R339	50515240	150			
R340·341	50515490	6.8k			
		TRIMMER RESISTORS			
VR301/304	50533670	330kΩ B 10φ			
VR302/305	50533480	10kΩ B 10φ			
VR303/306	50533480	10kΩ B 10φ			
		CAPACITORS			
		ALL CAPACITORS IN MICRO FARADS UNLESS OTHERWISE NOTED.			
C301/310	50554050	Elec. 10 16V			
C302/311	50554330	Elec. 220 6.3V			
C303/312	50554260	Elec. 33 16V			
C304/313	50548310	Mylar 0.15 50V	50548040 0.1μF		
	50549550	Mylar			
C305/314	50554050	Elec. 10 16V			
C305/315	50548330	Mylar 0.027 50V			
C307/316	50548270	Mylar 0.047 50V			
C308/317	50554220	Elec. 3.3 25V			
C309/318	50543440	Polyst. 820p 50V			
C319/322	50557030	Elec. 1 16V			
C320/323	50554030	Elec. 47 6.3V			
C321/324	50557030	Elec. 1 16V			
C325	50554170	Elec. 100 25V			
C328/329	50548040	Mylar 0.1 50V			
C330/331	50548120	Mylar 0.0015 50V			
		COILS			
L301/303	50566370	Record Compensation 2.4∿4.2mH			
L302/304	50566300	Trap 3mH			

PC BOARD
A-2520

BIAS OSC. AND REC. RELAY

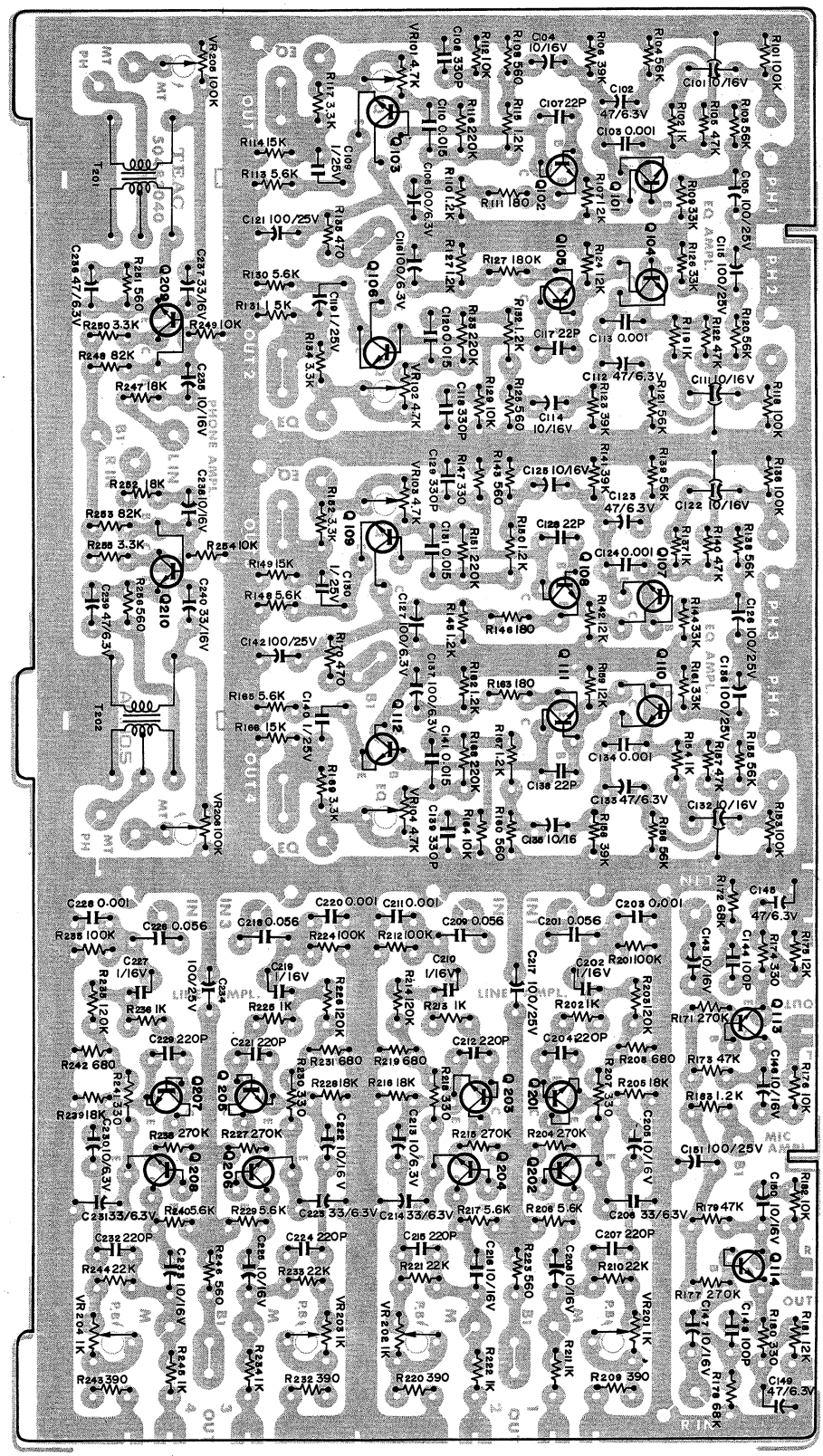


BIAS OSC. AND REC. RELAY

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
	50505220	PC Board Assy			
		SILICON TRANSISTOR			
Q401·402	50523850	2SC971, with Heat Sink			
		RESISTORS			
R401	50526090	Wire Wound 120Ω 2W			
R402	50514920	Carbon 2.2kΩ 1/2W			
R403	50515220	Carbon 100Ω 1/4W			
R404·405	50514920	Carbon 2.2kΩ 1/2W			
R406·407	50514990	Carbon 33Ω 1/2W			
R408	50514550	Carbon 1.5kΩ 1/2W			
		CAPACITORS			
C401	50554380	Elec. 220μF 35V			
C402·403	50548760	Mylar 0.0022μF 50V			
C404	50548810	Mylar 0.0033μF 50V			
C405	50544040	Mica 4200pF 250V			
C406	50548390	Mylar 0.1μF 400V			
C407	50548740	Mylar 0.022μF 150V			
		TRIMMER CAPACITORS			
VC401·402	50547070	80pF Max			
VC403·404	50547070	80pF Max			
		MISCELLANEOUS			
T401	50563170	Coil, Oscillator			
K401	50610730	Relay, 4T MY4-0 DC 100V			

PC BOARD
A-2520

MIC AND PLAYBACK AMPLIFIER



D-0663

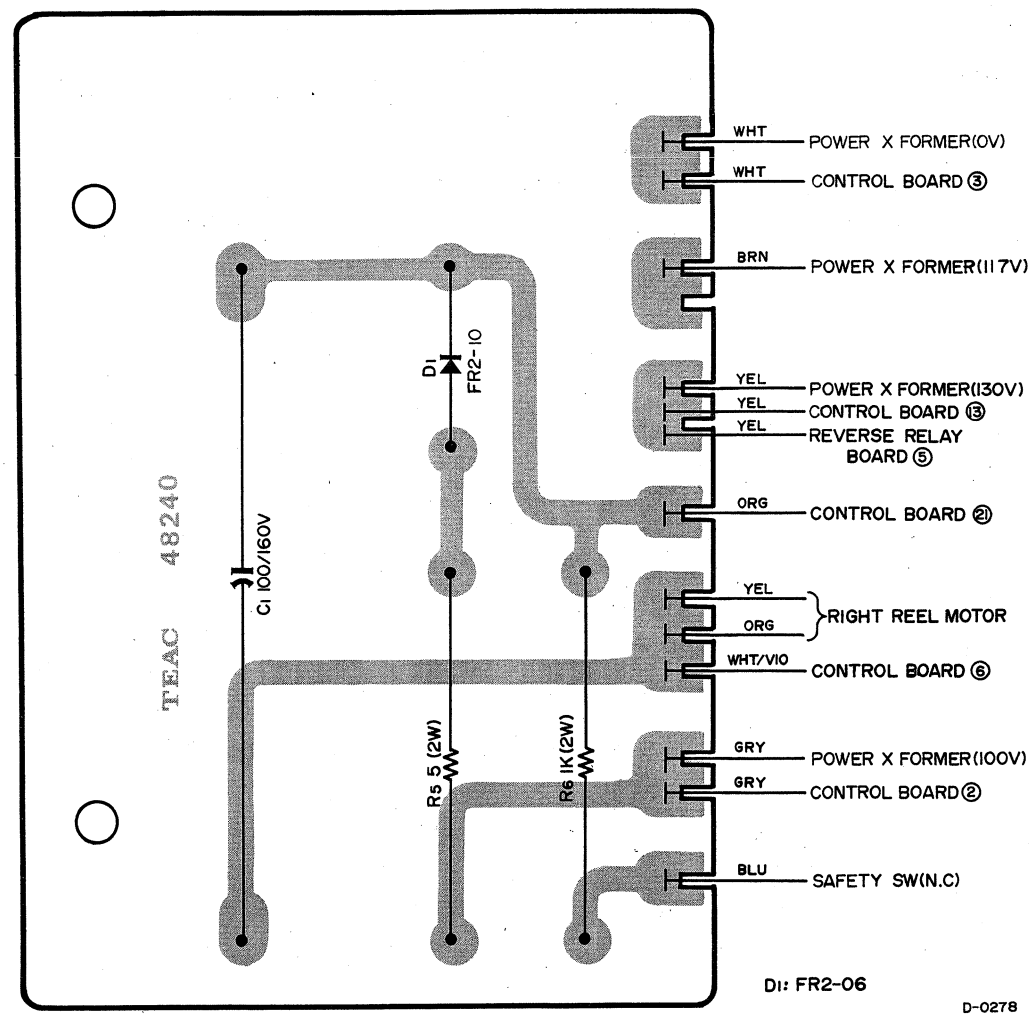
MIC AND PLAYBACK AMPLIFIER

CIRCUIT REF.NO. FRONT	CIRCUIT REF.NO. REAR	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
		50489930	PC Board Assy			
	SILICON TRANSISTORS					
Q101/104	Q107/110	50424240	2SC1000-BL			
Q102/105	Q108/111	50423650	2SA494-Y			
Q103/106	Q109/112	50423830	2SC536-F			
Q113/114	--------	50423870	2SC693-G			
Q201/203	Q205/207	50423770	2SC644-T			
Q202/204	Q206/208	50424220	2SC828-S			
Q209/210	--------	50424220	2SC828-S			
	CARBON RESISTORS					
R101/118	R136/153	50515640	100k			
R102/119	R137/154	50515340	1k			
R103/120	R138/155	50515610	56k			
R104/121	R139/156	50515610	56k			
R105/122	R140/157	50515590	47k			
R106/123	R141/158	50515580	39k			
R107/124	R142/159	50515500	12k			
R108/125	R143/160	50515310	560			
R109/126	R144/161	50515570	33k			
R110/127	R145/162	50515350	1.2k			
R111/128	R146/163	50515250	180			
R112/129	R147/164	50515490	10k			
R113/130	R148/165	50515460	5.6k			
R114/131	R149/166	50515510	15k			
R115/132	R150/167	50515350	1.2k			
R116/133	R151/168	50515680	220k			
R117/134	R152/169	50515410	3.3k 5%			
R135	R170	50515300	470			
R171/177	--------	50515700	270k			
R172/178	--------	50515620	68k			
R173/179	--------	50515590	47k			
R174/180	--------	50515280	330	50515260	220	
R175/181	--------	50515500	12k			
R176/182	--------	50515490	10k			
R183	--------	50515350	1.2k			
R201/212	R224/235	50515640	100k			
R202/213	R225/236	50515340	1k			
R203/214	R226/237	50515650	120k			
R204/215	R227/238	50515700	270k			
R205/216	R228/239	50515520	18k			
R206/217	R229/240	50515460	5.6k			
R207/218	R230/241	50515280	330			
R208/219	R231/242	50515320	680			
R209/220	R232/243	50515290	390			
R210/221	R233/244	50515540	22k			

MIC AND PLAYBACK AMPLIFIER (CONTINUED)

CIRCUIT REF.NO. FRONT	REAR	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
R211/222	R234/245	50515340	1k			
R223	R246	50515310	560			
R247/252	--------	50515520	18k			
R248/253	--------	50515630	82k			
R249/254	--------	50515490	10k			
R250/255	--------	50515410	3.3k			
R251/256	--------	50515310	560			
	TRIMMER RESISTORS					
VR101/102	VR103/104	50533460	4.7kΩ B 10ϕ			
VR201/202	VR203/204	50533500	1kΩ B 10ϕ			
VR205/206	-------	50533490	100kΩ B 10ϕ			
	CAPACITORS					
C101/111	C122/132	50546140	Tantalum 10 16V			
C102/112	C123/133	50554030	Elec. 47 6.3V			
C103/113	C124/134	50548320	Mylar 0.001 50V			
C104/114	C125/135	50554050	Elec. 10 16V			
C105/115	C126/136	50554170	Elec. 100 25V			
C106/116	C127/137	50554230	Elec. 100 6.3V			
C107/117	C128/138	50543330	High Q 22p 50V			
C108/118	C129/139	50543340	High Q 330p 50V			
C109/119	C130/140	50554810	Elec. 1 25V			
C110/120	C131/141	50548420	Mylar 0.015 50V			
C121	C142	50554170	Elec. 100 25V			
C143/147	--------	50554050	Elec. 10 16V			
C144/148	--------	50543400	High Q 150p 50V			
C145/149	--------	50554030	Elec. 47 6.3V			
C146/150	--------	50554050	Elec. 10 16V			
C151	--------	50554170	Elec. 100 25V			
C201/209	C218/226	50548460	Mylar 0.056 50V			
C202/210	C219/227	50557030	Elec. 1 16V			
C203/211	C220/228	50548320	Mylar 0.001 50V			
C204/212	C221/229	50543420	High Q 220p 50V			
C205/213	C222/230	50554050	Elec. 10 16V			
C206/214	C223/231	50554240	Elec. 33 6.3V			
C207/215	C224/232	50543420	High Q 220p 50V			
C217	C234	50554170	Elec. 100 25V			
C235/238	--------	50554050	Elec. 10 16V			
C236/239	--------	50554030	Elec. 47 6.3V			
C237/240	--------	50554260	Elec. 33 16V			
	TRANSFORMERS					
T201/202	--------	50562140	Transformer, Output 3kΩ:8Ω			

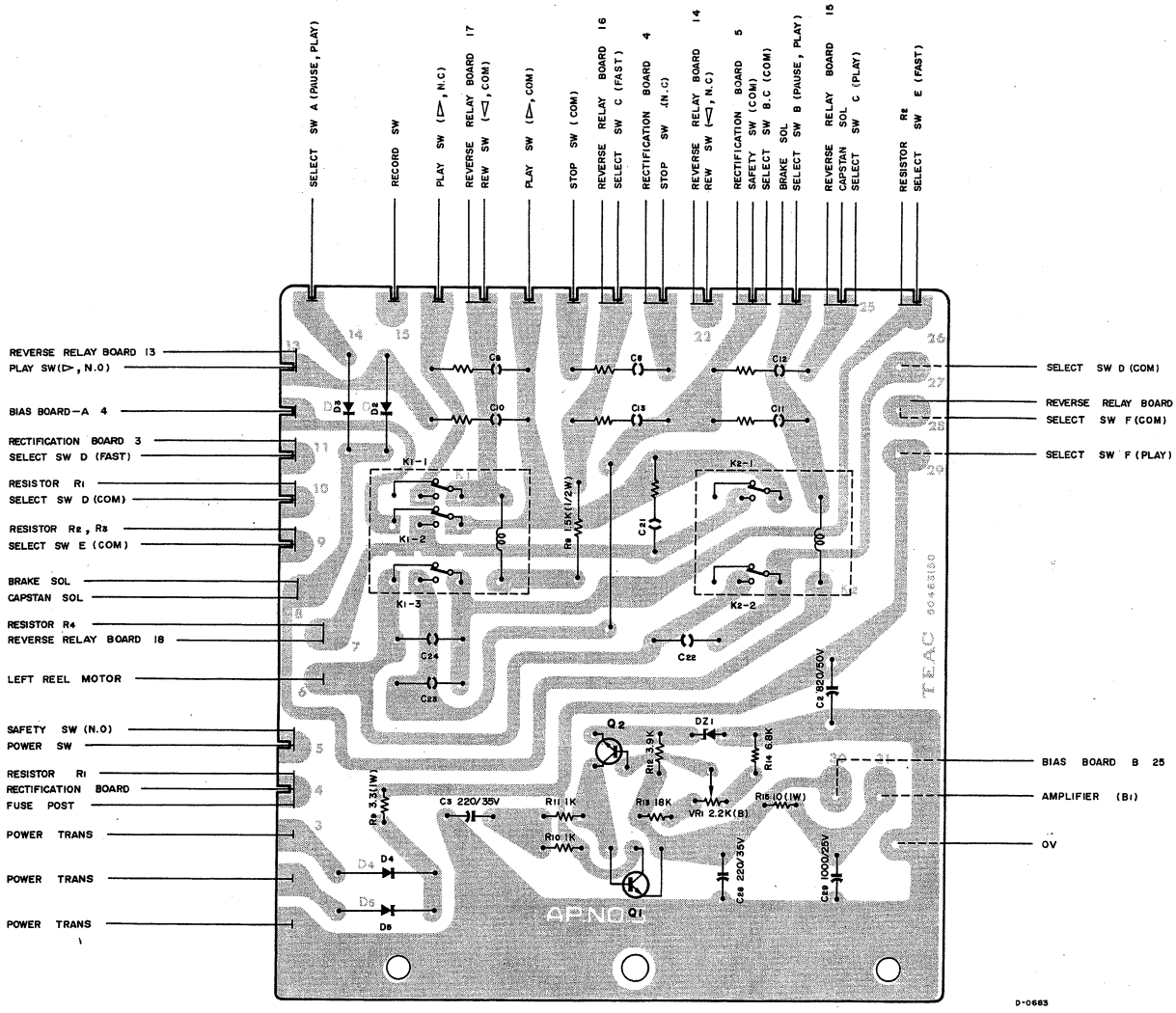
RECTIFIER



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
	50500500	PC Board Assy			
D1	50422380	Diode FR2-10			
C1	50555250	Cap., Elec. 100μF 160V			
R5	50526030	Resistor, Wire Wound 5Ω 2W			
R6	50578820	Resistor, Carbon 1kΩ 2W			
	50233930	Angle, PC Board, B			

PC BOARD
A-2520/A-2420

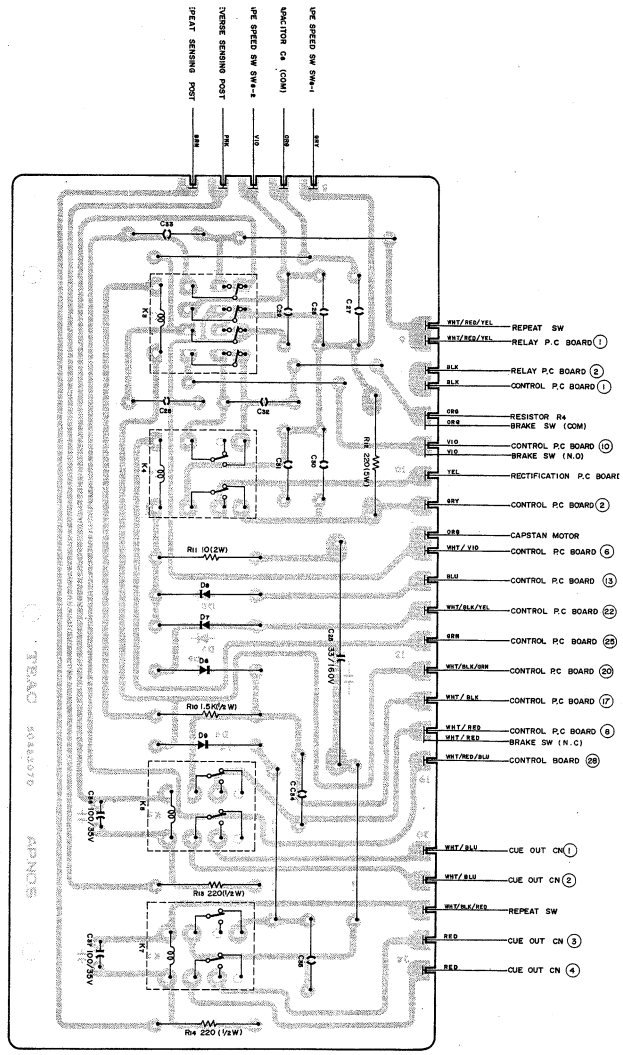
CONTROL RELAY



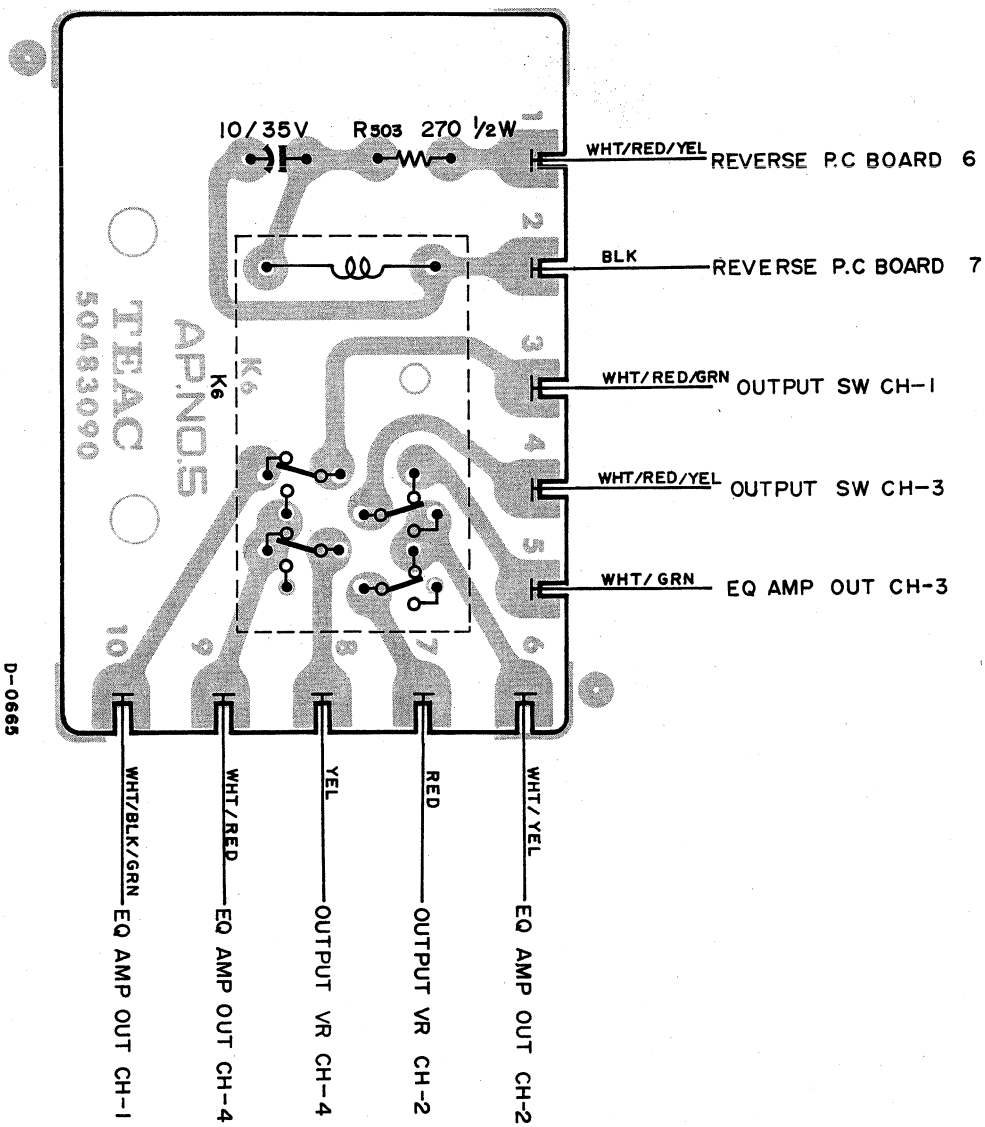
CONTROL RELAY

CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
	50490230	PC Board Assy			
		RELAYS			
K1	50610730	4T, MY-4-0 DC 100V			
K2	50610750	2T, MY-2-0 DC 100V			
		SILICON TRANSISTORS			
Q1	50424190	2SD235-O			
Q2	50423510	2SC733-Y			
		DIODES			
D2	50422360	FR2-06	50422820	SIB03-10	
D4·5	50422360	FR2-06			
D3	50422380	FR2-10			
DZ1	50422580	02Z 6.2A			
		RESISTORS			
R7	50574860	Carbon 1.5kΩ 1/2W			
R8	50525440	Wire Wound 3.3Ω 1W			
R9	50525100	Wire Wound 10Ω 1W			
R15·16	50515340	Carbon 1kΩ 1/4W			
R17·20	50515430	Carbon 3.9kΩ 1/4W			
R18	50515480	Carbon 8.2kΩ 1/4W			
R19	50515510	Carbon 15kΩ 1/4W			
		TRIMMER RESISTOR			
VR1	50533640	2.2kΩ B 10ϕ			
		CAPACITORS			
C2	50554380	Elec. 220μF 35V			
C3	50554440	Elec. 1000μF 25V			
C8∿13	50529050	Spark Killer 0.1μF + 120Ω 400V			
C21	50529050	Spark Killer 0.1μF + 120Ω 400V			
C22·23·24	50548390	Mylar 0.1μF 400V			
C38	50557080	Elec. 820μF 50V			
C39	50554630	Elec. 220μF 50V			

REVERSE RELAY



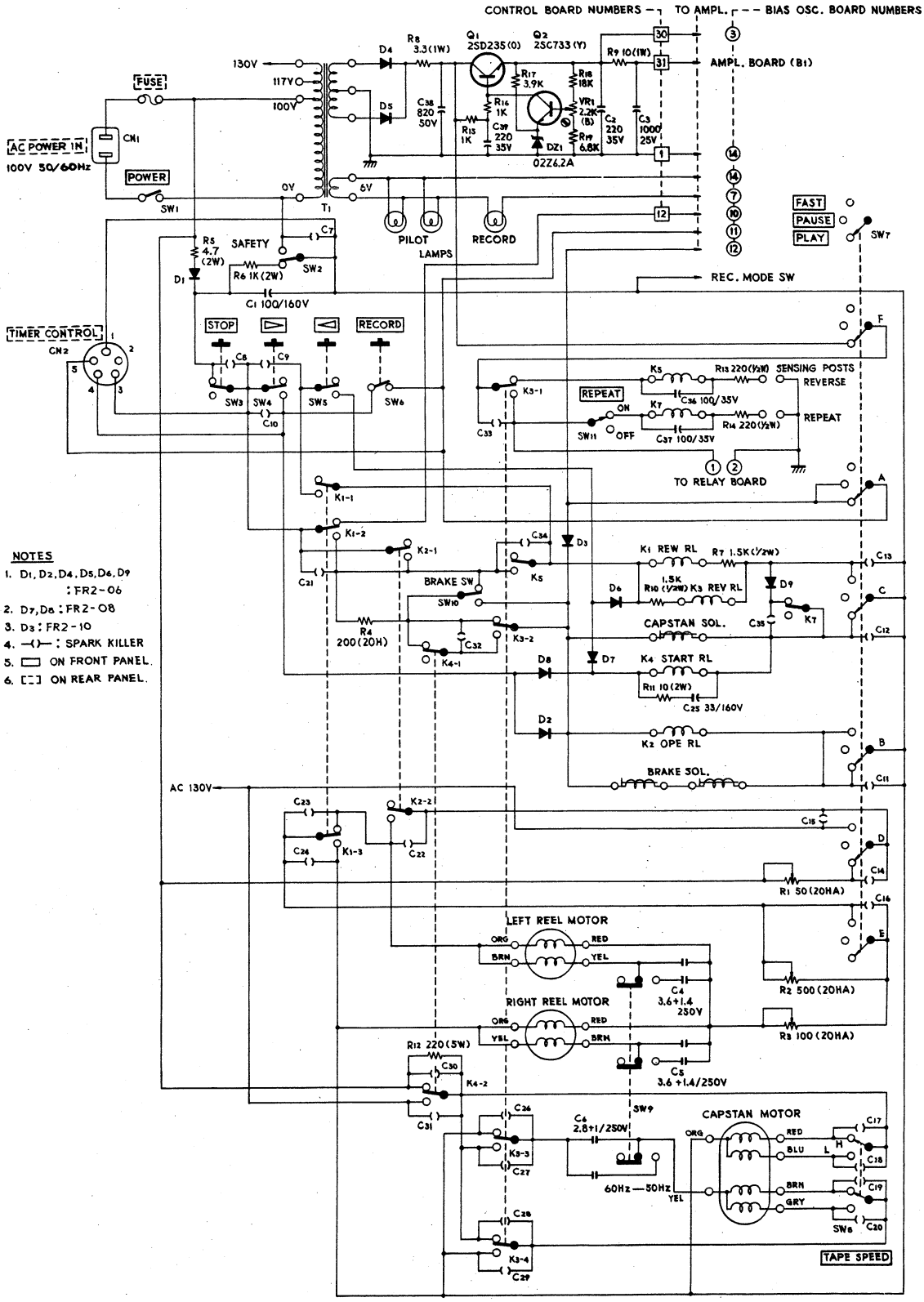
REV·FWD MODE SELECT RELAY



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
	50483340	PC Board Assy			
	50611010	Relay, Sub Miniature			
	50574680	Resistor, Carbon 330Ω 1/2W			
	50554510	Cap., Elec. 10 35V			

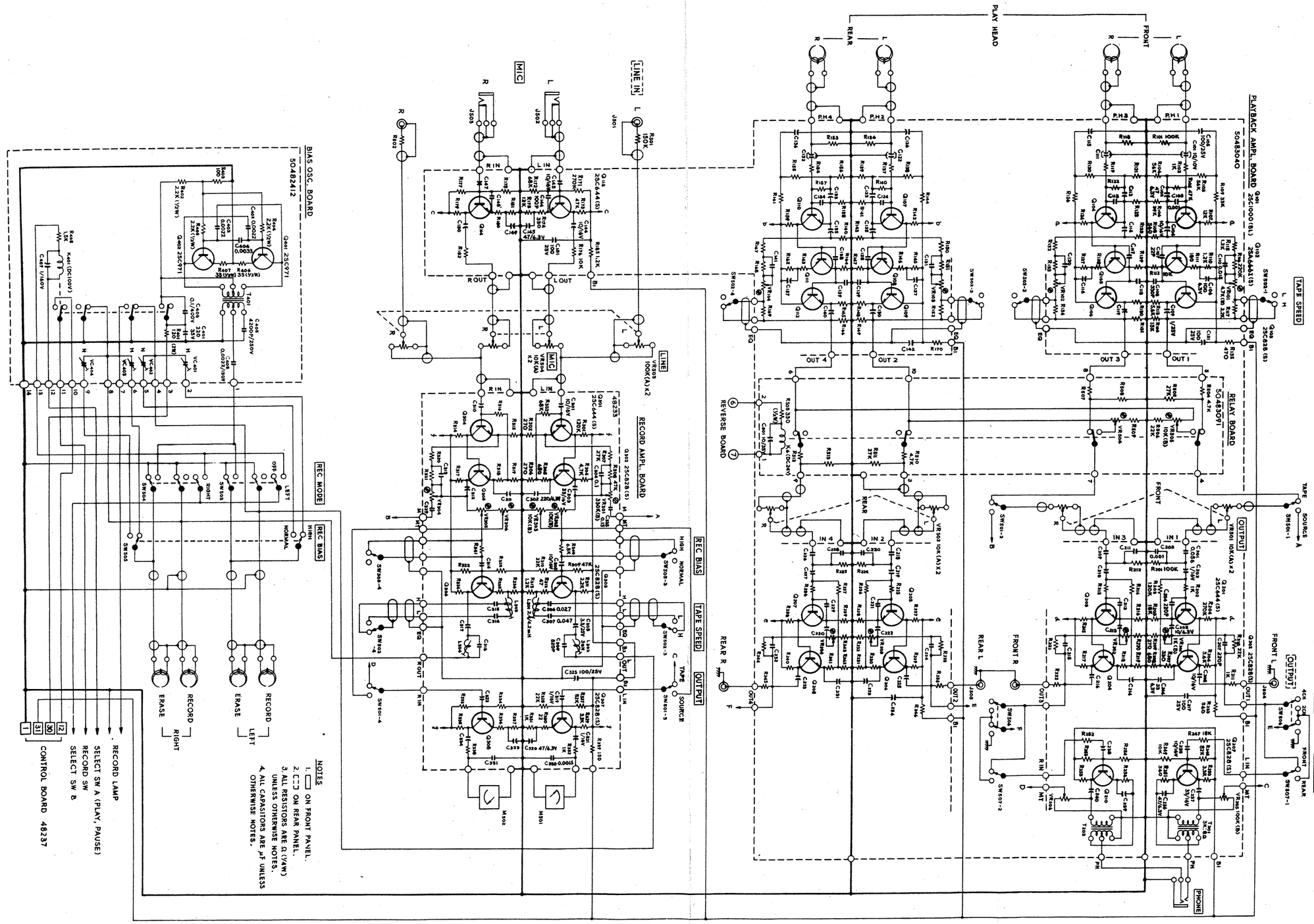
SCHEMATIC DIAGRAM
A-2520

TAPE TRANSPORT A-2520



SCHEMATIC DIAGRAM
A-2520

RECORD/PLAYBACK AMPLIFIER A-2520



TEAC®

A-2420

4CH/2CH STEREO TAPE PLAYER

PARTS LIST

REPLACEMENT INFORMATION

Replacement parts are available through your nearest TEAC dealer or directly from the TEAC office.
Changes are constantly being made to make TEAC products better and more reliable.
Therefore, when ordering parts, always include the following information:

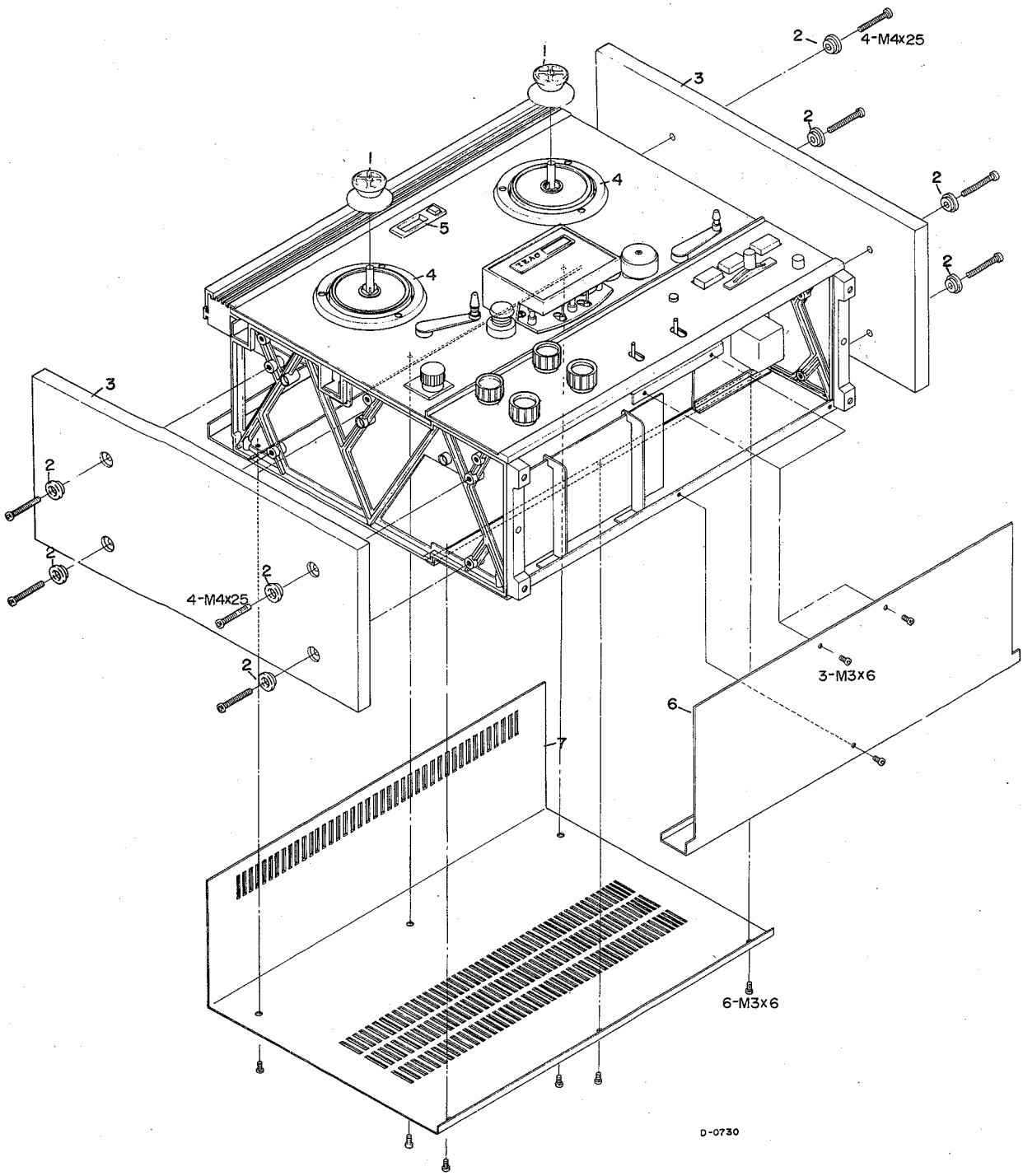
MODEL *SERIAL NO.* *REF.NO.* *PARTS NO.* *DESCRIPTION*

E-418

TEAC CORPORATION

EXPLODED VIEW 1
A-2420

TRIM PARTS

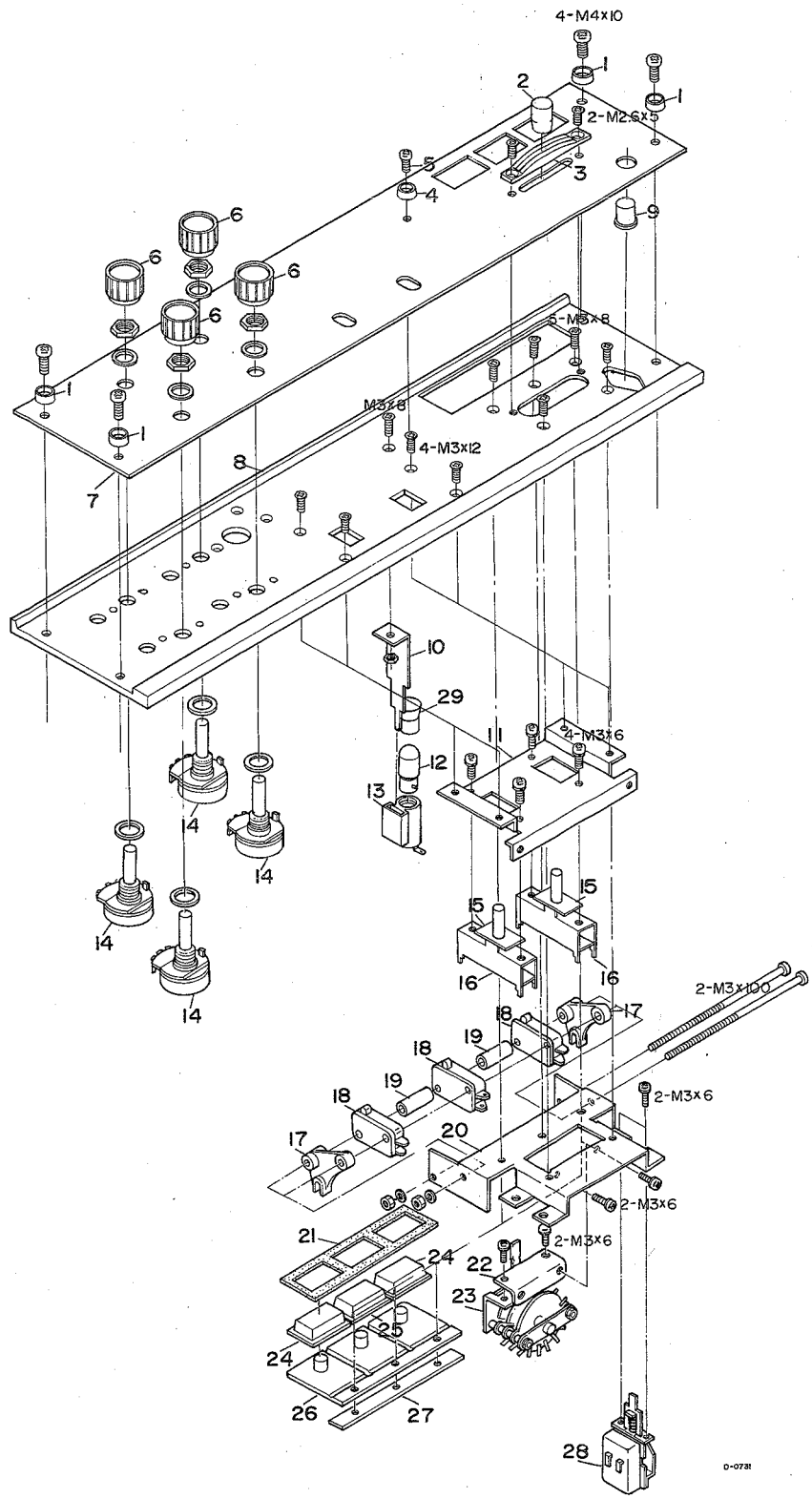


TRIM PARTS

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
1-1	50161580	Reel Holder			
1-2	50276930	Washer			
1-3	50288330	Wooden Plate			
1-4	50161940	Reel Protector			
1-5	50277020	Counter Escutcheon			
1-6	50288070	Bottom Cover			
1-7	50288290	Rear Cover Assy			

EXPLODED VIEW 2
A-2420

CONTROL PANEL

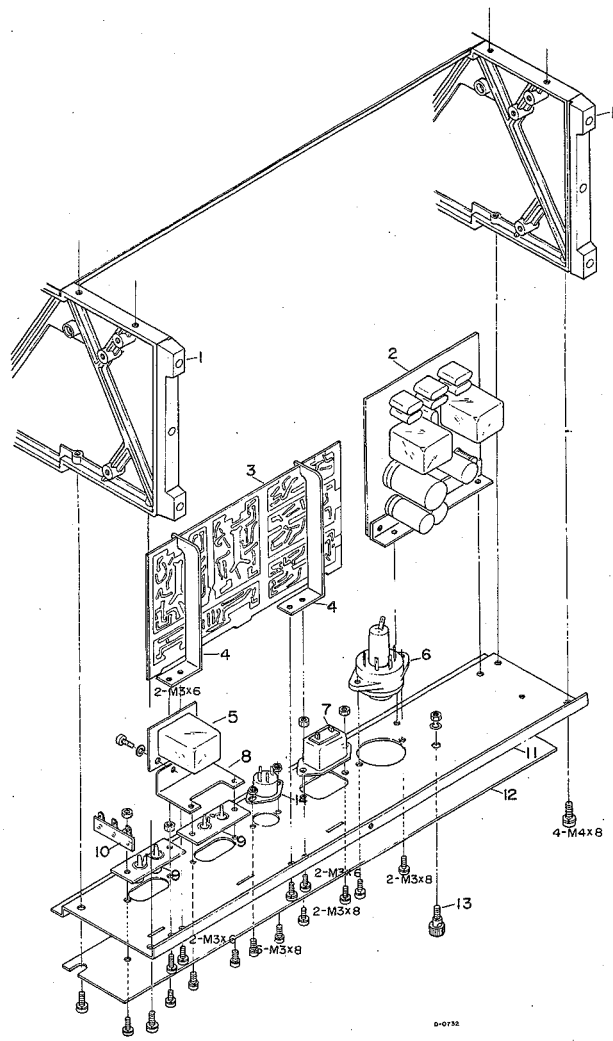


CONTROL PANEL

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
2- 1	50277111	Trim Washer			
2- 2	50253470	Knob (D)			
2- 3	50449900	Lever Switch Cover			
2- 4	50236430	Pilot Lamp Escutcheon			
2- 5	50419060	Pilot Holder			
2- 6	50253390	Knob (Upper)			
2- 7	50236190	Amp Trim Panel			
2- 8	50236201	Amp Panel			
2- 9	50253120	Push Button			
2-10	50415120	Lamp Holder			
2-11	50236210	Lever SW Mount Plate			
2-12	50414510	8V Pilot Lamp			
2-13	50415250	Pilot Lamp Socket			
2-14	50537200	Potentiometer 10kΩA			
2-15	50330080	Switch Protector Sheet			
2-16	50937580	Lever Switch			
2-17	50277541	Base Plate Holder			
2-18	50446090	Micro Switch			
2-19	50241121	Control Collar			
2-20	50277782	Control Base Plate			
2-21	50277240	Rubber Plate Collar			
2-22	50277771	Rotary SW Mount Plate			
2-23	50442350	Rotary Switch (Lever)			
2-24	50253210	Operation Button			
2-25	50253200	Operation Button Stop			
2-26	50253113	Push Button Base			
2-27	50277010	Control Plate			
2-28	50443210	Push Switch (Lock)			
2-29	50419070	Pilot Cover			

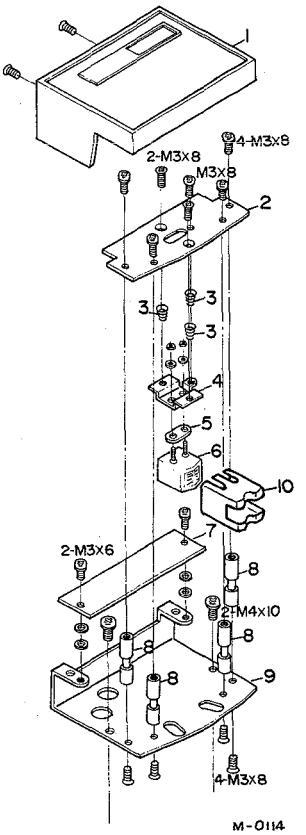
EXPLODED VIEW AND PARTS LIST 3
A-2420

REAR PANEL



REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
3- 1	50277980	Case Leg			
3- 2	50490230	Control PC Board Assy			
3- 3	50489920	Playback EQ Amp PC Board Assy			
3- 4	50233760	PC Board Plate			
3- 5	50483330	Relay PC Board			
3- 6	50412143	Voltage Selector with Fuse			
3- 7	50431050	AC Socket			
3- 8	50235940	Base Plate Holder B			
3- 9	50434631	2P Pin Jack			
3-10	50452060	Terminal Strip 1L-2P			
3-11	50236220	Amp Chassis			
3-12	50236230	Connector Plate			
3-13	50454071	Ground Terminal			
3-14	50434980	4P Socket			

HEAD ASSY

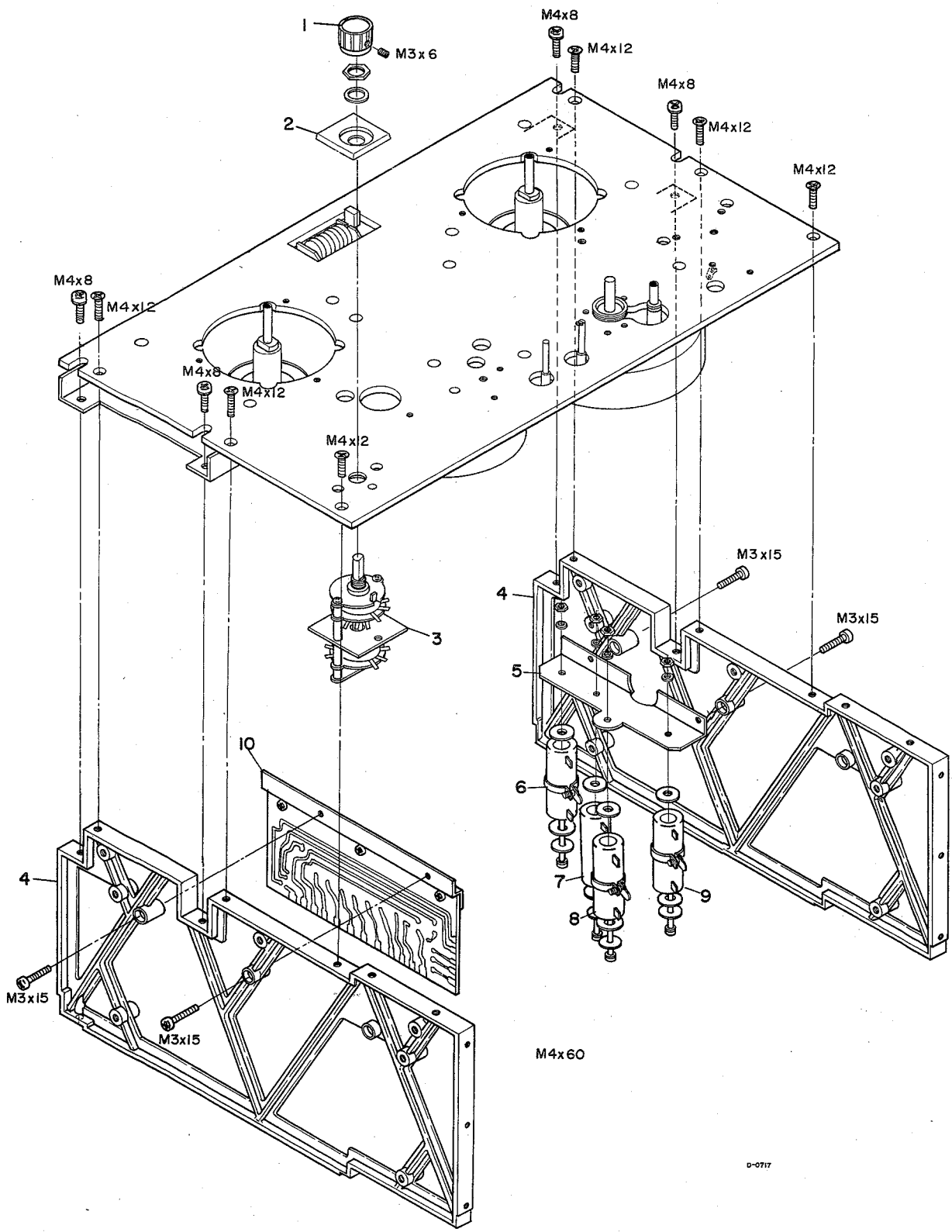


REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
4- 1	50136130	Head Housing			
	50136210	Emblem (A-2420)			
4- 2	50134520	Head Angle Plate			
4- 3	50220500	Spring			
4- 4	50134370	Head Mount Plate			
4- 5	50134390	Head Spacer			
4- 6	50664310	Playback Head 4T-4CH			
4- 7	50482421	PC Board (Head)			
4- 8	50182672	Guide Pin			
4- 9	50134530	Head Plate			
4-10	50675650	Shield Case			

EXPLODED VIEW 5

A-2420

DECK PANEL



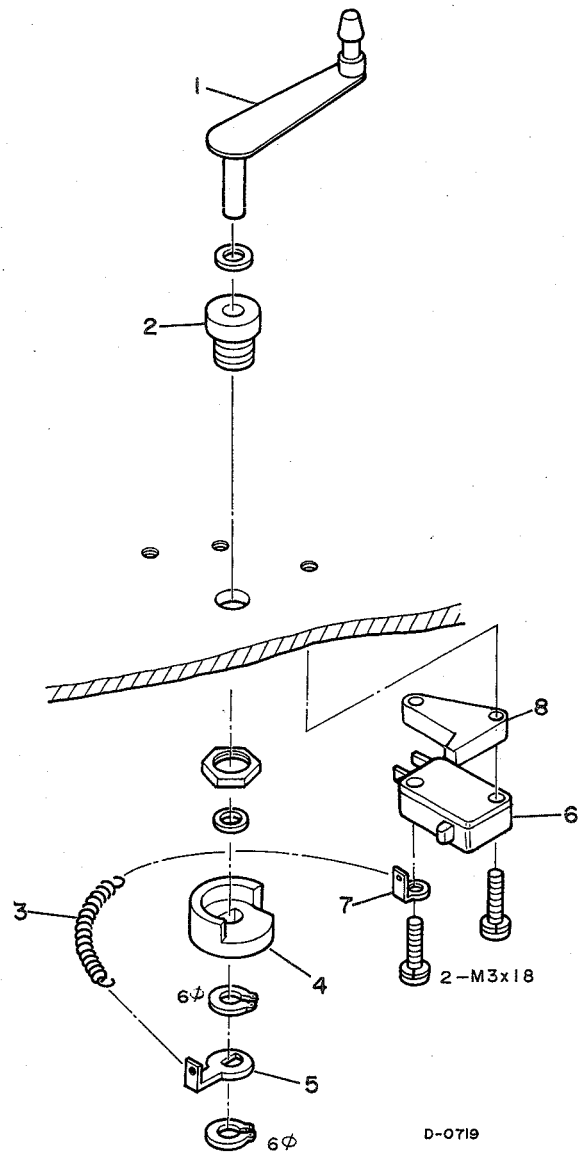
DECK PANEL

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
5- 1	50253390	Knob (Upper)			
5- 2	50263171	Tape Speed Name Plate			
5- 3	50442360	Rotary Switch			
5- 4	50112712	Side Frame			
5- 5	50330110	Resistor Mount Plate			
5- 6	50524321	Wire Wound Resistor 500Ω 20HA			
5- 7	50522190	Wire Wound Resistor 200Ω 20H			
5- 8	50522210	Wire Wound Resistor 50Ω 20HA			
5- 9	50524200	Wire Wound Resistor 100Ω 20HA			
5-10	50489950	Reverse PC Board Assy			

EXPLODED VIEW AND PARTS LIST 6

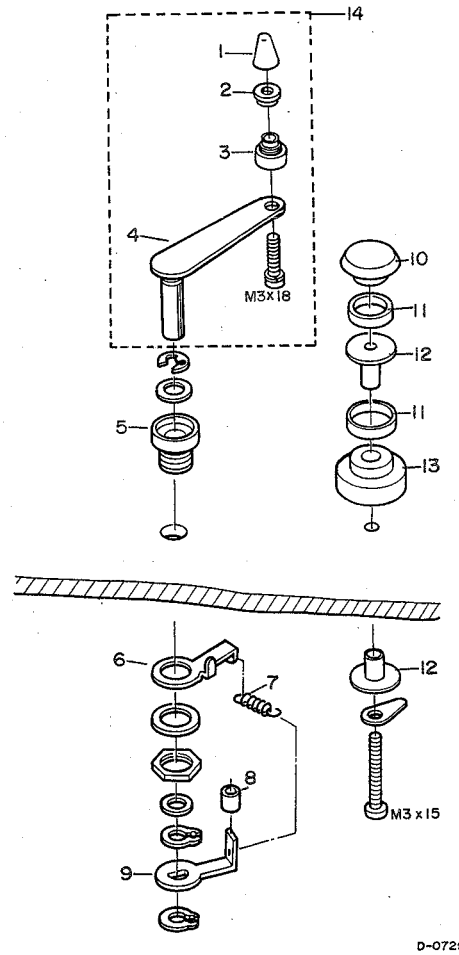
A-2520 A-2420

RIGHT TENSION ARM



REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
6-1	50180432	Tension Arm Assy (Right)			
6-2	50182701	Arm Holder			
6-3	50221122	Spring			
6-4	50182990	Tension Arm Drum			
6-5	50276860	Spring Hang (Right)			
6-6	50446180	Micro Switch			
6-7	50286860	Spring Hang			
6-8	50182730	Limit Stop (Right)			

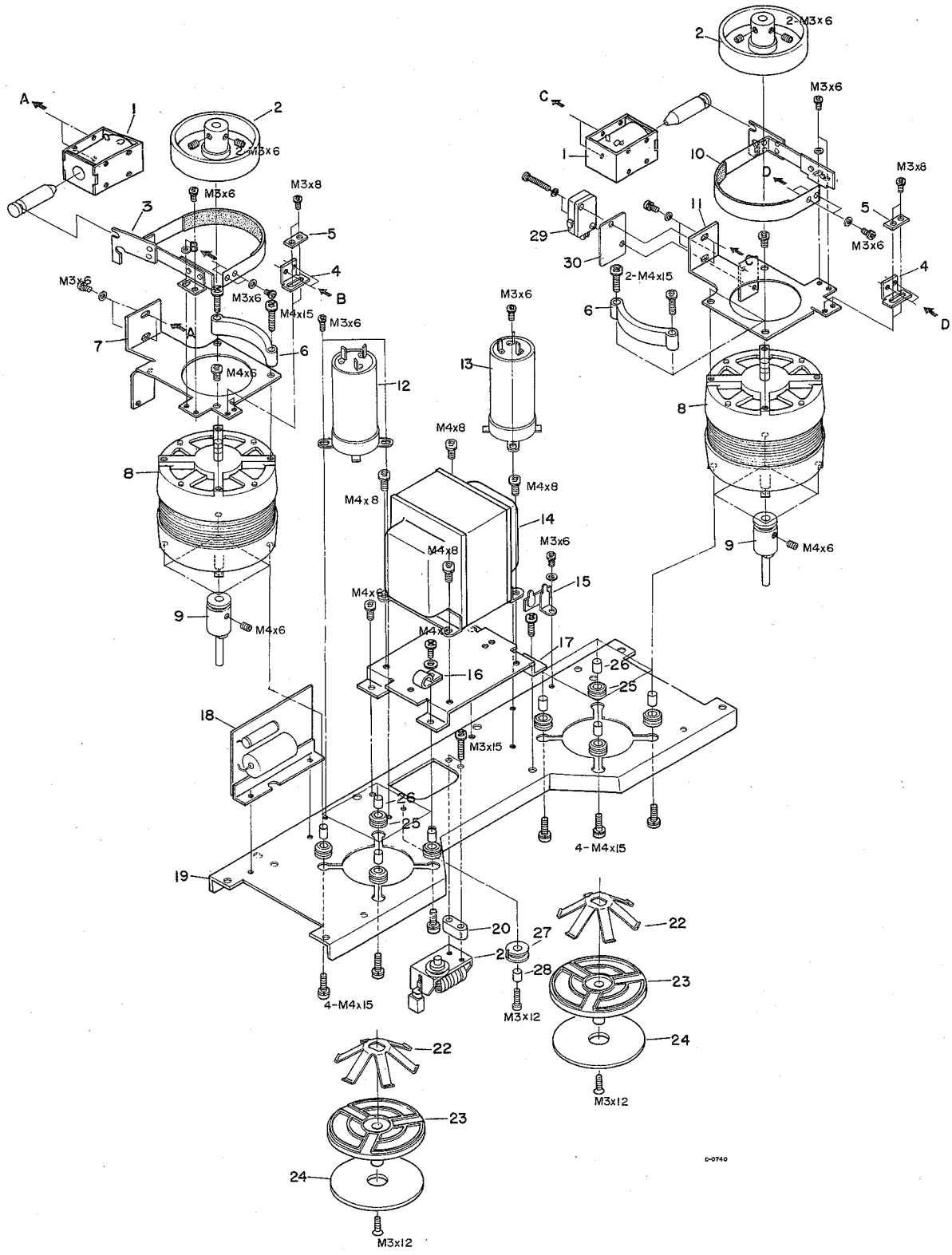
LEFT TENSION ARM



REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
7- 1	50134360	Guide Cap			
7- 2	50182780	Guide C			
7- 3	50182760	Guide D			
7- 4	50182821	Tension Arm Assy (Left)			
	50183040	Arm PC Board			
7- 5	50182800	Arm Holder B			
7- 6	50276870	Spring Hanger (Left)			
7- 7	50221110	Spring (B)			
7- 8	50276990	Rubber Collar			
7- 9	50182750	Limit Stop (Left)			
7-10	50123911	Guide Ling Cap			
7-11	50183871	Guide Ring			
7-12	50183860	Sensing Post			
7-13	50183880	Guide Ring Base			
7-14	50183780	Left Tension Arm Assy			

EXPLODED VIEW 8
A-2520/A-2420

REEL MOTOR ASSY



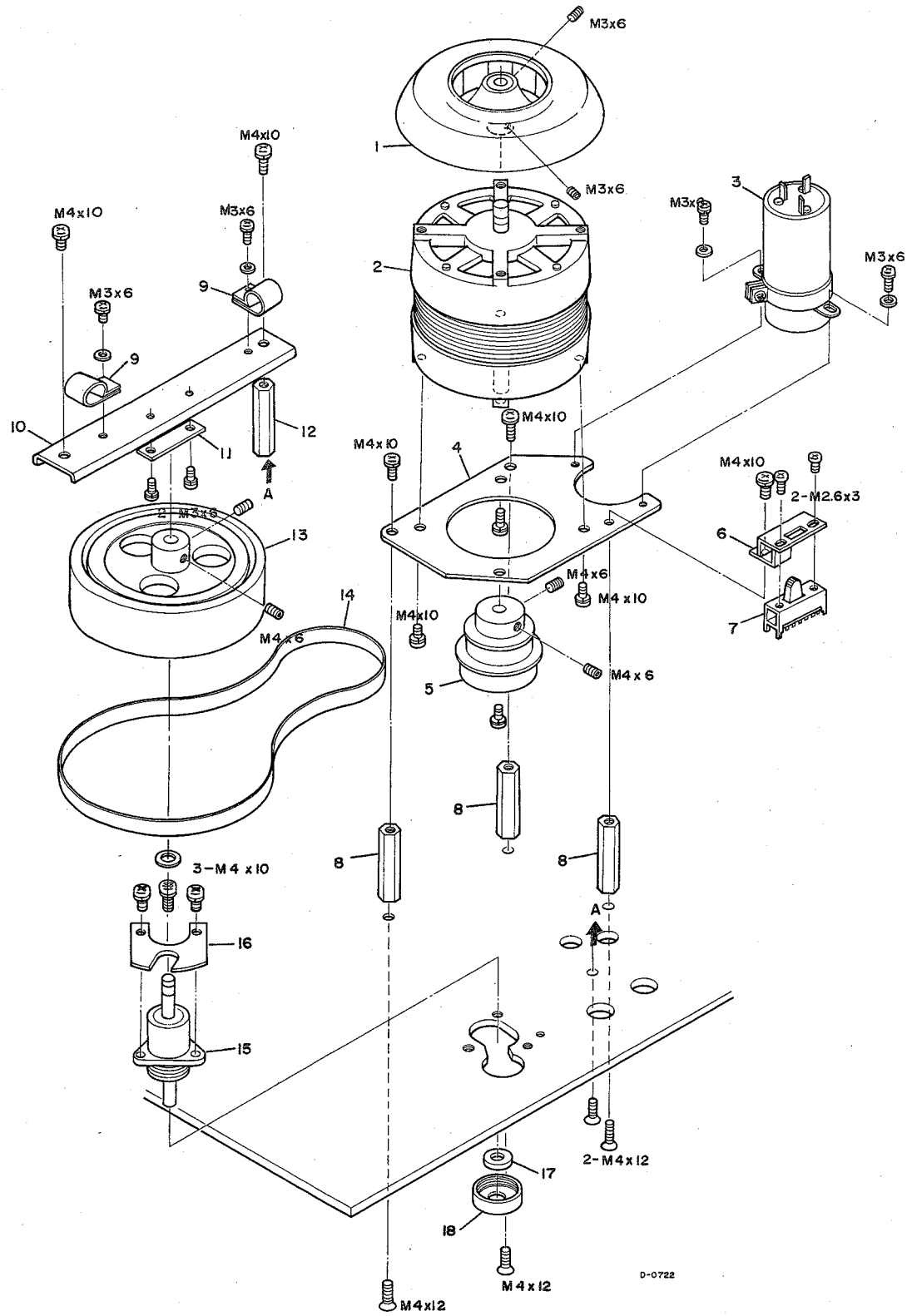
REEL MOTOR ASSY

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
8- 1	50616370	Solenoid			
8- 2	50172831	Brake Drum			
8- 3	50170143	Brake Band Assy B			
8- 4	50170160	Band Mount Angle			
8- 5	50170150	Band Pressure			
8- 6	50172550	Brake Retainer			
8- 7	50172612	Brake Mount Plate (B)			
8- 8	50702251	Reel Motor			
8- 9	50162950	Reel Shaft B			
8-10	50170182	Brake Band Assy A			
8-11	50172602	Brake Mount Plate (A)			
8-12	50545660	MP Capacitor 3+1μF/AC 250V			
8-13	50545660	MP Capacitor 3+1μF/AC 250V			
8-14	50562350	Power Transformer (or 50562360)			
8-15	50452080	Terminal Strip 1L-1P			
8-16	50276280	Cord Pressure (Large)			
8-17	50233751	Power Transformer Mount Plate			
8-18	50500500	Rectifier PC Board Assy			
8-19	50233922	Motor Chassis			
8-20	50276950	Counter Spacer			
8-21	50585090	Tape Counter			
8-22	50163070	Height Adjust Spring			
8-23	50161981	Reel Table			
8-24	50820351	Reel Table Cover			
8-25	50162960	Rubber Cushion Ring B			
8-26	50162760	Rubber Cushion Spacer			
8-27	50162940	Counter Relay Pulley			
8-28	50163100	Pulley Shaft			
8-29	50446180	Micro Switch V-1A44			
8-30	50173530	Insulator Plate			

EXPLODED VIEW 9

A-2520/A-2420

CAPSTAN DRIVE ASSY

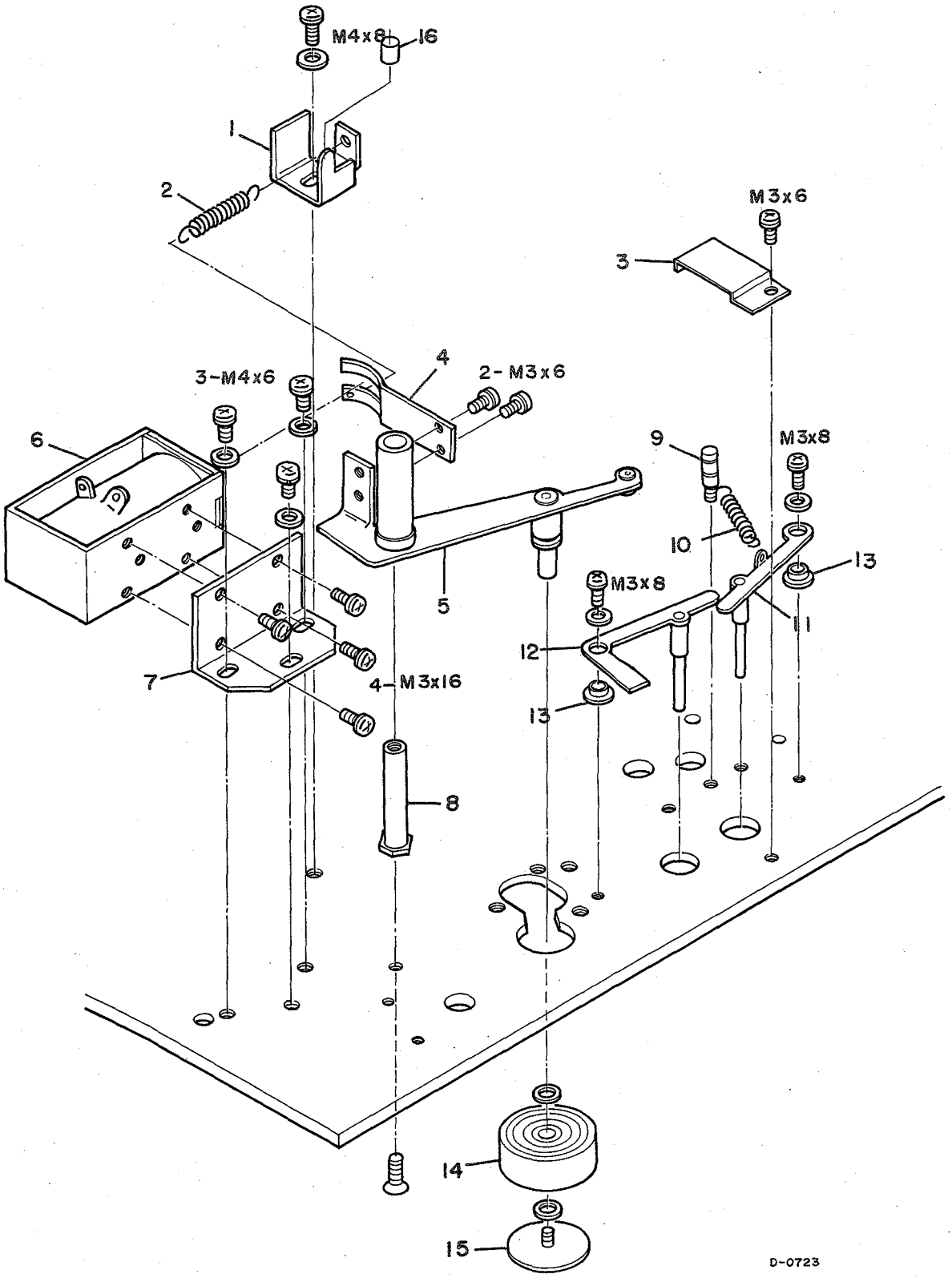


CAPSTAN DRIVE ASSY

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
9- 1	50123980	Fan			
9- 2	50701343	Capstan Motor			
9- 3	50545650	MP Capacitor 2+0.8μF/250V			
9- 4	50123870	Motor Mount Plate			
9- 5	50124002	Motor Pulley			
9- 6	50276910	Slide SW Mount Plate			
9- 7	50444170	Slide Switch			
9- 8	50123850	Pole (Capstan)			
9- 9	50276290	Cord Pressure			
9-10	50277151	Thrust Angle			
9-11	50277230	Thrust Plate			
9-12	50123860	Pole (Flywheel)			
9-13	50123801	Flywheel			
9-14	50123830	Capstan Belt			
9-15	50120440	Capstan Assy			
9-16	50141830	Holder Supporter			
9-17	50123900	Sponge Oiler			
9-18	50123971	Metalized Cap			

EXPLODED VIEW 10
A-2520/A-2420

LIFTER AND PINCH ROLLER



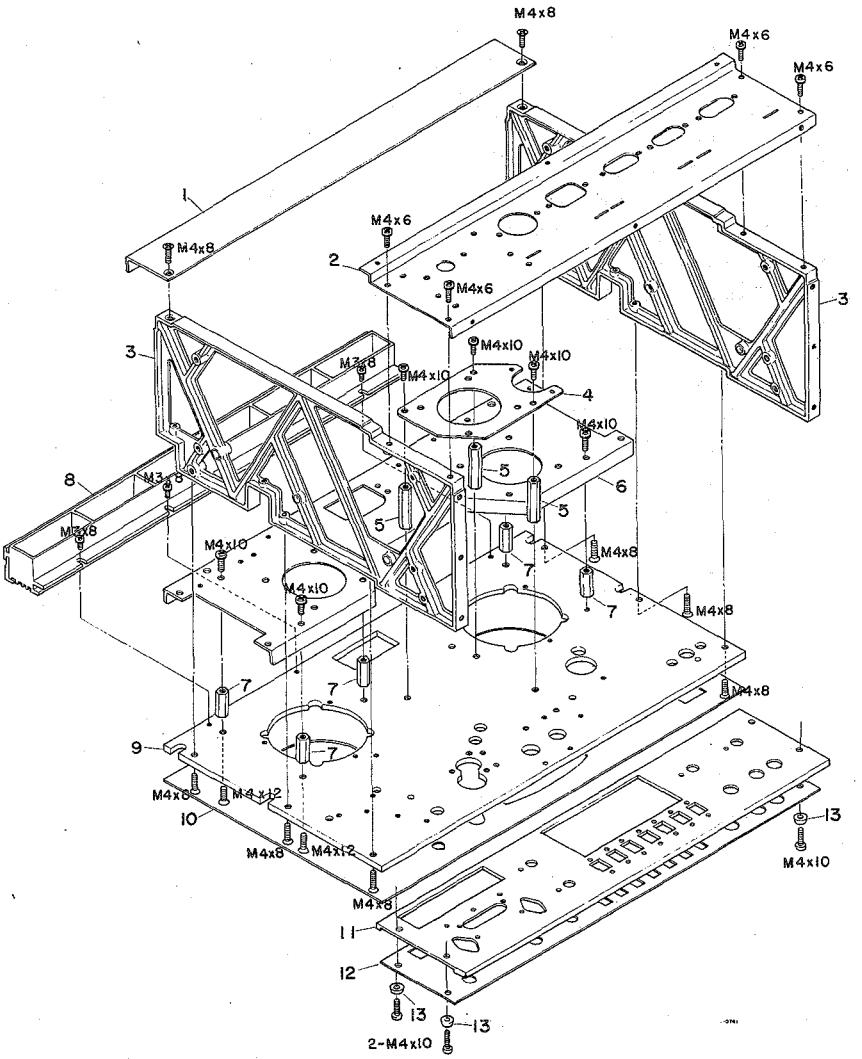
LIFTER AND PINCH ROLLER

REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
10- 1	50141841	Pinch Roller Stopper			
10- 2	50220441	Return Spring			
10- 3	50152450	Lifter Angle			
10- 4	50221151	Pressure Spring			
10- 5	50140235	Pinch Roller Arm Assy			
10- 6	50616340	Solenoid			
10- 7	50277080	Solenoid Mount Plate			
10- 8	50141770	Roller Arm Shaft			
10- 9	50123140	Spring Angle Pin			
10-10	50221100	Spring (A)			
10-11	50150251	Lifter Arm (B) Assy			
10-12	50150241	Lifter Arm (A) Assy			
10-13	50152501	Lifter Arm Shaft			
10-14	50141750	Pinch Roller			
10-15	50141760	Pinch Roller Cap			
10-16	50275690	Rubber Cushion Ring			

EXPLODED VIEW AND PARTS LIST 11

A-2520/A-2420

MAIN CHASSIS



REF. NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
11- 1	50235311	Cover Angle Plate			
11- 2	50236220	Amp Chassis			
11- 3	50112712	Side Frame			
11- 4	50123870	Motor Mount Plate			
11- 5	50123850	Pole (Capstan)			
11- 6	50233922	Motor Chassis			
11- 7	50161950	Pole (Reel Motor)			
11- 8	50112980	Top Grille Assy			
11- 9	50112674	Top Panel			
11-10	50112662	Face Panel			
11-11	50236201	Amp Panel			
11-12	50236180	Amp Trim Panel			
11-13	50277111	Trim Washer			

PRINTED CIRCUIT BOARD AND PARTS LIST

A-2420

REPLACEMENT INFORMATION

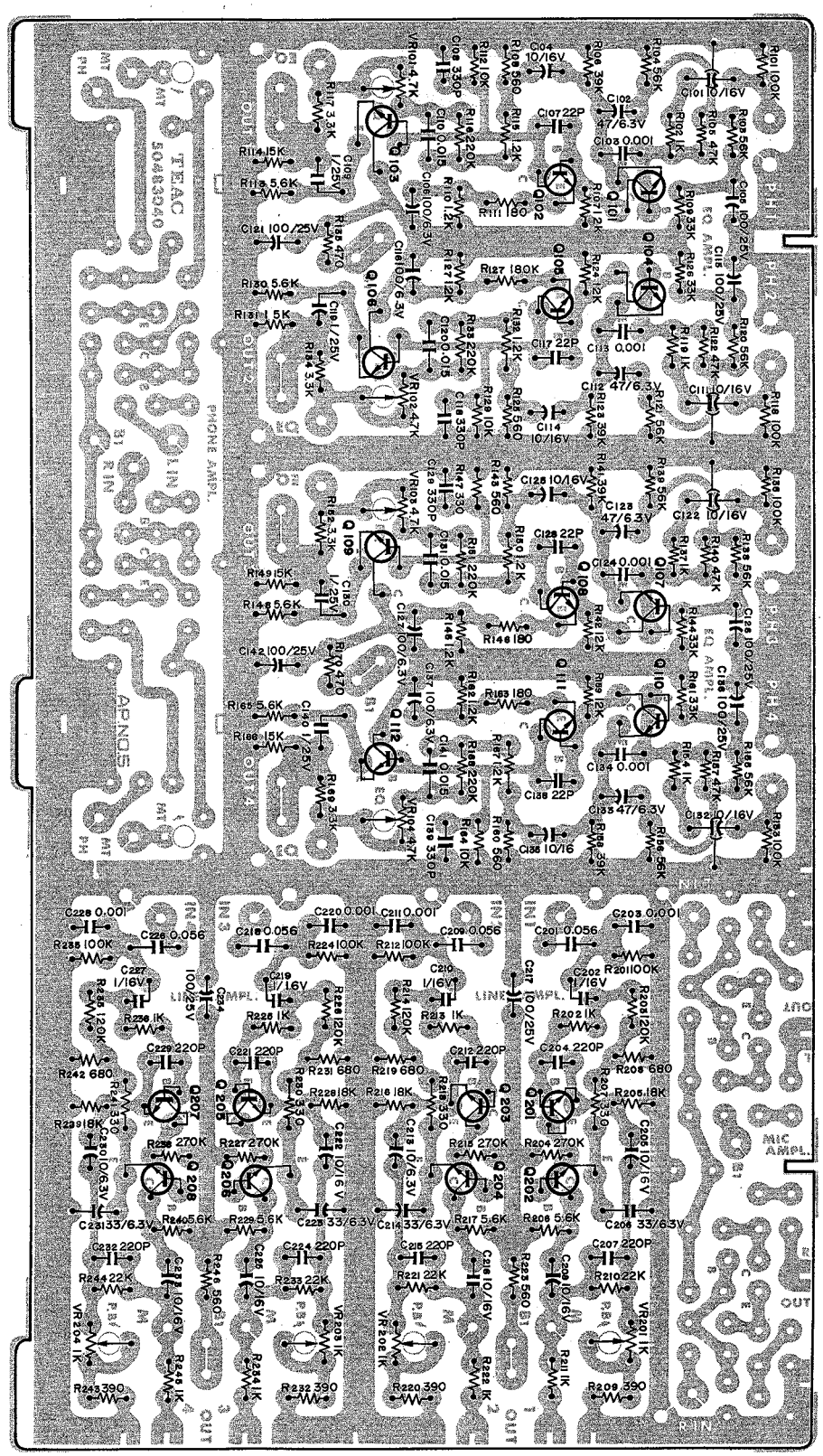
Replacement parts are available through your nearest TEAC dealer or directly from the TEAC office.
Changes are constantly being made to make TEAC products better and more reliable.
Therefore, when ordering parts, always include the following information:

MODEL *SERIAL NO.* *REF.NO.* *PARTS NO.* *DESCRIPTION*

TEAC CORPORATION

PC BOARD
A-2420

PLAYBACK AMPLIFIER



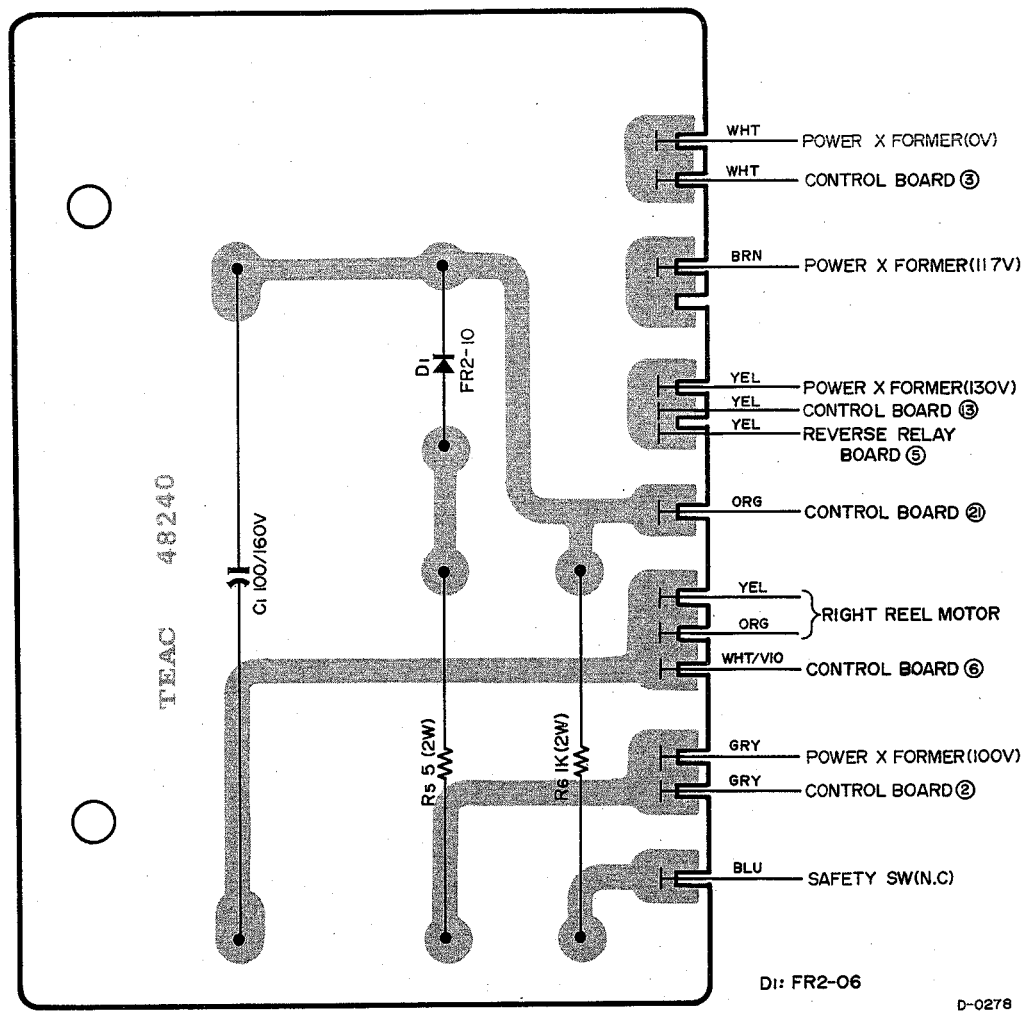
PLAYBACK AMPLIFIER

CIRCUIT REF.NO. FRONT	REAR	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
		50489920	PC Board Assy			
	SILICON TRANSISTORS					
Q101/104	Q107/110	50424240	2SC1000-BL			
Q102/105	Q108/111	50423650	2SA494-Y			
Q103/106	Q109/112	50423830	2SC536-F			
Q201/203	Q205/207	50423770	2SC644-T			
Q202/204	Q206/208	50424220	2SC828-S			
Q209/210	--------	50424220	2SC828-S			
	CARBON RESISTORS					
ALL RESISTORS IN OHMS, 10% TOLERANCE, 1/4 WATTS UNLESS OTHERWISE NOTED.						
R101/118	R136/153	50515640	100k			
R102/119	R137/154	50515340	1k			
R103/120	R138/155	50515610	56k			
R104/121	R139/156	50515610	56k			
R105/122	R140/157	50515590	47k			
R106/123	R141/158	50515580	39k			
R107/124	R142/159	50515500	12k			
R108/125	R143/160	50515310	560			
R109/126	R144/161	50515570	33k			
R110/127	R145/162	50515350	1.2k			
R111/128	R146/163	50515250	180			
R112/129	R147/164	50515490	10k			
R113/130	R148/165	50515460	5.6k			
R114/131	R149/166	50515510	15k			
R115/132	R150/167	50515350	1.2k			
R116/133	R151/168	50515680	220k			
R117/134	R152/169	50515410	3.3k 5%			
R135	R170	50515300	470			
R201/212	R224/235	50515640	100k			
R202/213	R225/236	50515340	1k			
R203/214	R226/237	50515650	120k			
R204/215	R227/238	50515700	270k			
R205/216	R228/239	50515520	18k			
R206/217	R229/240	50515460	5.6k			
R207/218	R230/241	50515280	330			
R208/219	R231/242	50515320	680			
R209/220	R232/243	50515290	390			
R210/221	R233/244	50515540	22k			
R211/222	R234/245	50515340	1k			
R223	R246	50515310	560			

PLAYBACK AMPLIFIER (CONTINUED)

CIRCUIT REF.NO. FRONT	REAR	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
	TRIMMER RESISTORS					
VR101/102	VR103/104	50533460	4.7kΩ B 10φ			
VR201/202	VR203/204	50533500	1kΩ B 10φ			
	CAPACITORS					
ALL CAPACITORS IN MICRO FARADS UNLESS OTHERWISE NOTED.						
C101/111	C122/132	50546140	Tantalum 10 16V			
C102/112	C123/133	50554030	Elec. 47 6.3V			
C103/113	C124/134	50548320	Mylar 0.001 50V			
C104/114	C125/135	50554050	Elec. 10 16V			
C105/115	C126/136	50554170	Elec. 100 25V			
C106/116	C127/137	50554230	Elec. 100 6.3V			
C107/117	C128/138	50543330	High Q 22p 50V			
C108/118	C129/139	50543340	High Q 330p 50V			
C109/119	C130/140	50554810	Elec. 1 25V			
C110/120	C131/141	50548420	Mylar 0.015 50V			
C121	C142	50554170	Elec. 100 25V			
C201/209	C218/226	50548460	Mylar 0.056 50V			
C202/210	C219/227	50557030	Elec. 1 16V			
C203/211	C220/228	50548320	Mylar 0.001 50V			
C204/212	C221/229	50543420	High Q 220p 50V			
C205/213	C222/230	50554050	Elec. 10 16V			
C206/214	C223/231	50554240	Elec. 33 6.3V			
C207/215	C224/232	50543420	High Q 220p 50V			
C217	C234	50554170	Elec. 100 25V			

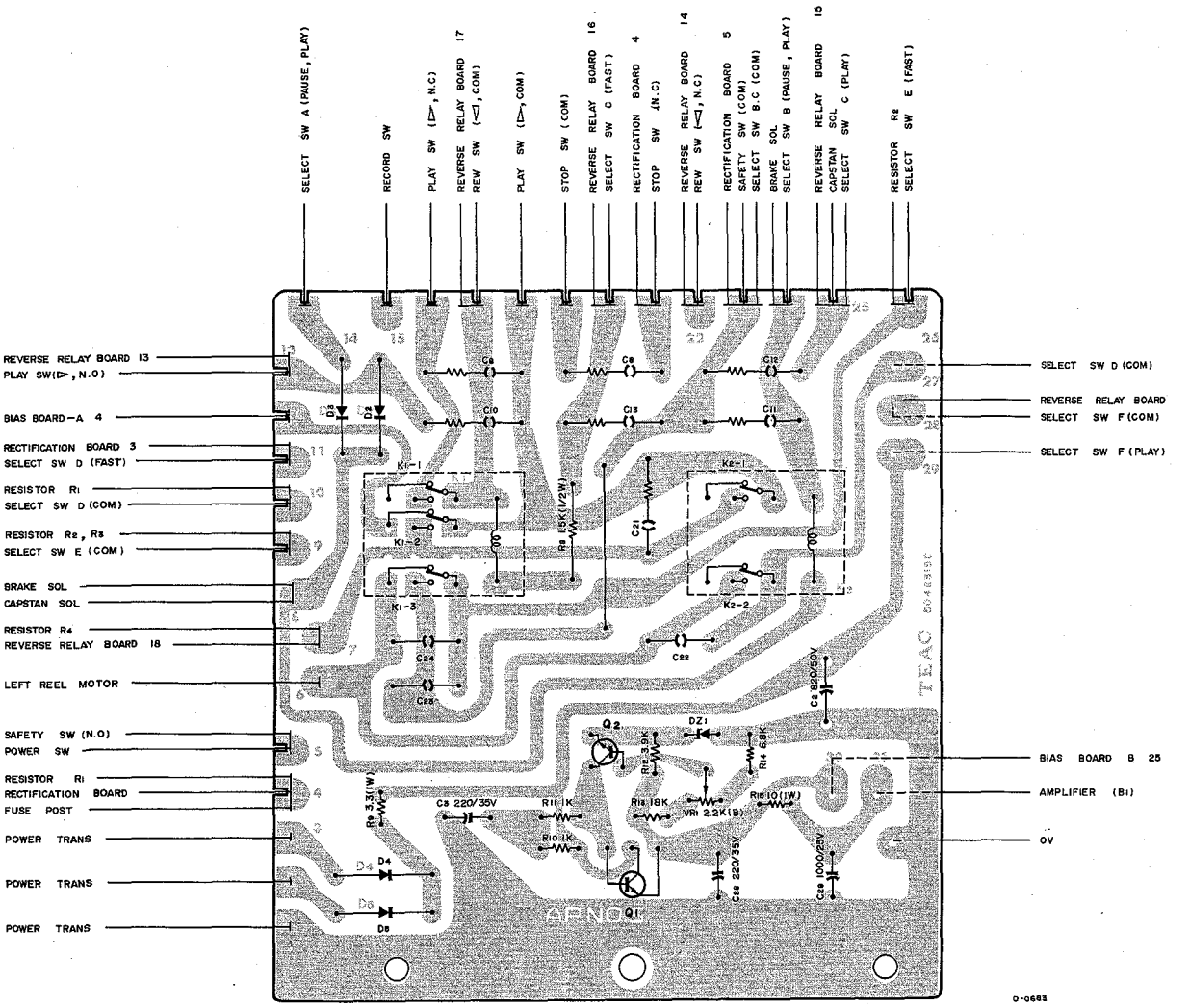
RECTIFIER



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
	50500500	PC Board Assy			
D1	50422380	Diode FR2-10			
C1	50555250	Cap., Elec. 100μF 160V			
R5	50526030	Resistor, Wire Wound 5Ω 2W			
R6	50578820	Resistor, Carbon 1kΩ 2W			
	50233930	Angle, PC Board, B			

PC BOARD
A-2520/A-2420

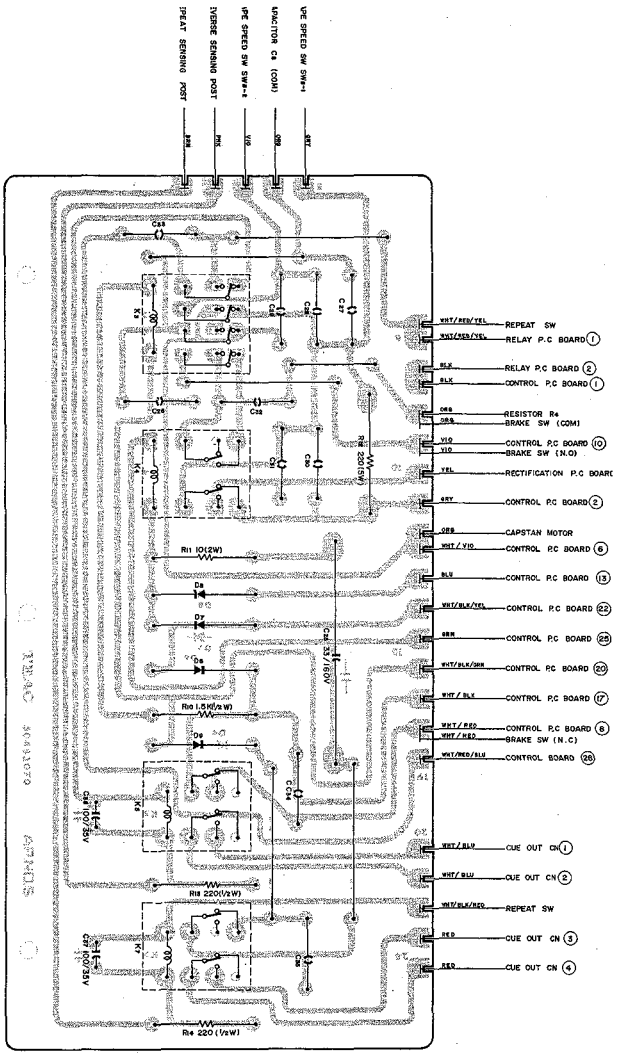
CONTROL RELAY



CONTROL RELAY

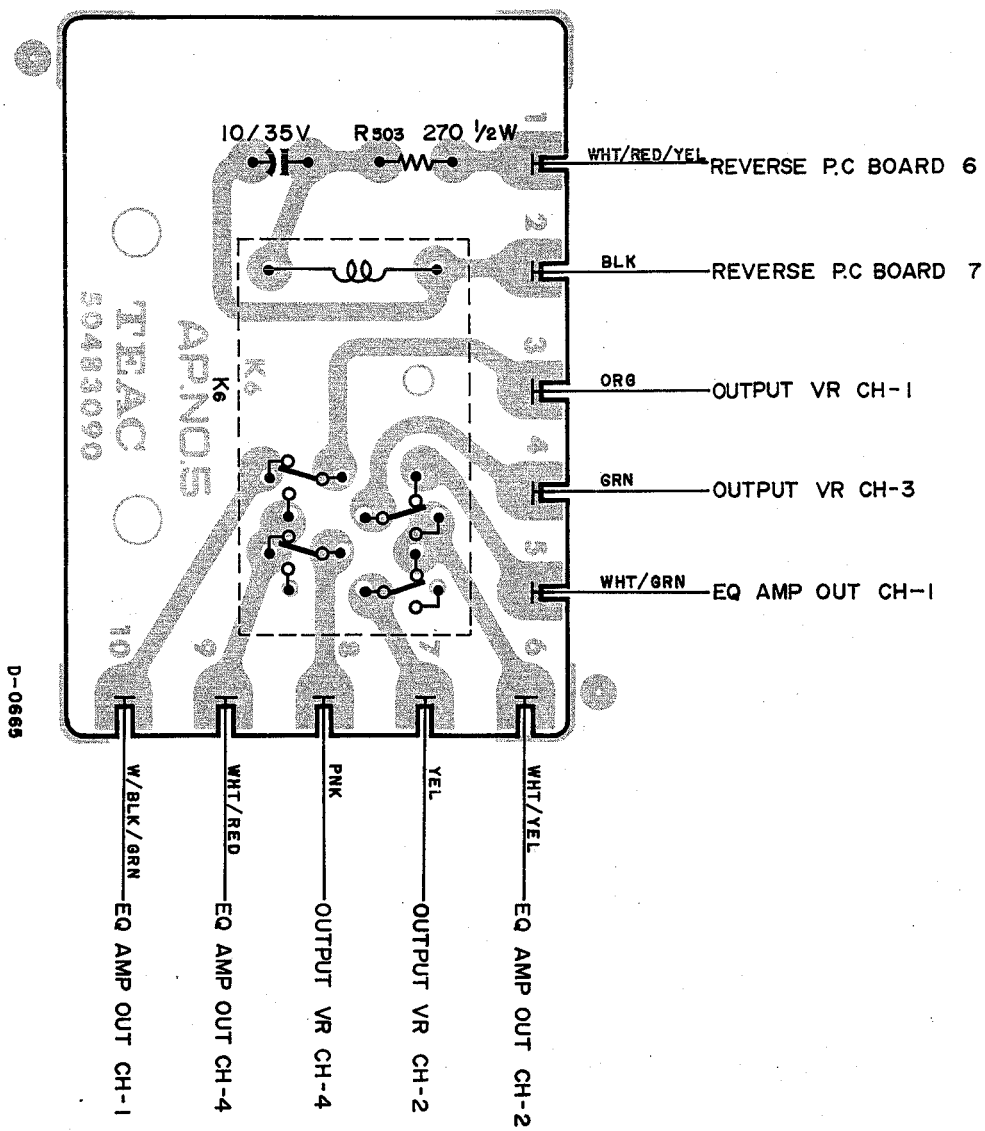
CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
	50490230	PC Board Assy			
		RELAYS			
K1	50610730	4T, MY-4-0 DC 100V			
K2	50610750	2T, MY-2-0 DC 100V			
		SILICON TRANSISTORS			
Q1	50424190	2SD235-O			
Q2	50423510	2SC733-Y			
		DIODES			
D2	50422360	FR2-06	50422820	SIB03-10	
D4·5	50422360	FR2-06			
D3	50422380	FR2-10			
DZ1	50422580	02Z 6.2A			
		RESISTORS			
R7	50574860	Carbon 1.5kΩ 1/2W			
R8	50525440	Wire Wound 3.3Ω 1W			
R9	50525100	Wire Wound 10Ω 1W			
R15·16	50515340	Carbon 1kΩ 1/4W			
R17·20	50515430	Carbon 3.9kΩ 1/4W			
R18	50515480	Carbon 8.2kΩ 1/4W			
R19	50515510	Carbon 15kΩ 1/4W			
		TRIMMER RESISTOR			
VR1	50533640	2.2kΩ B 10ϕ			
		CAPACITORS			
C2	50554380	Elec. 220μF 35V			
C3	50554440	Elec. 1000μF 25V			
C8∿13	50529050	Spark Killer 0.1μF + 120Ω 400V			
C21	50529050	Spark Killer 0.1μF + 120Ω 400V			
C22·23·24	50548390	Mylar 0.1μF 400V			
C38	50557080	Elec. 820μF 50V			
C39	50554630	Elec. 220μF 50V			

REVERSE RELAY



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
	50489950	PC Board Assy			
	50610750	Relay, MY2-0 DC 100V			
	50610730	Relay, MY4-0 DC 100V			
	50611000	Relay, MX2P-0, DC 24V, ×2			
R13·14	50574660	Resistor, Carbon 220Ω 1/2W			
R10	50574860	Resistor, Carbon 1.5kΩ 1/2W			
R11	50525810	Resistor, Wire Wound 10Ω 2W			
R12	50526080	Resistor, Wire Wound 220Ω 5W			
C25	50555510	Cap., Elec. 33 160V			
C36·37	50554630	Cap., Elec. 100 35V			
	50529050	Spark-Killer 0.1μF + 120Ω 400V, ×10			
D6·9	50422360	Diode, FR2-06			
D7·8	50422370	Diode, FR2-08			

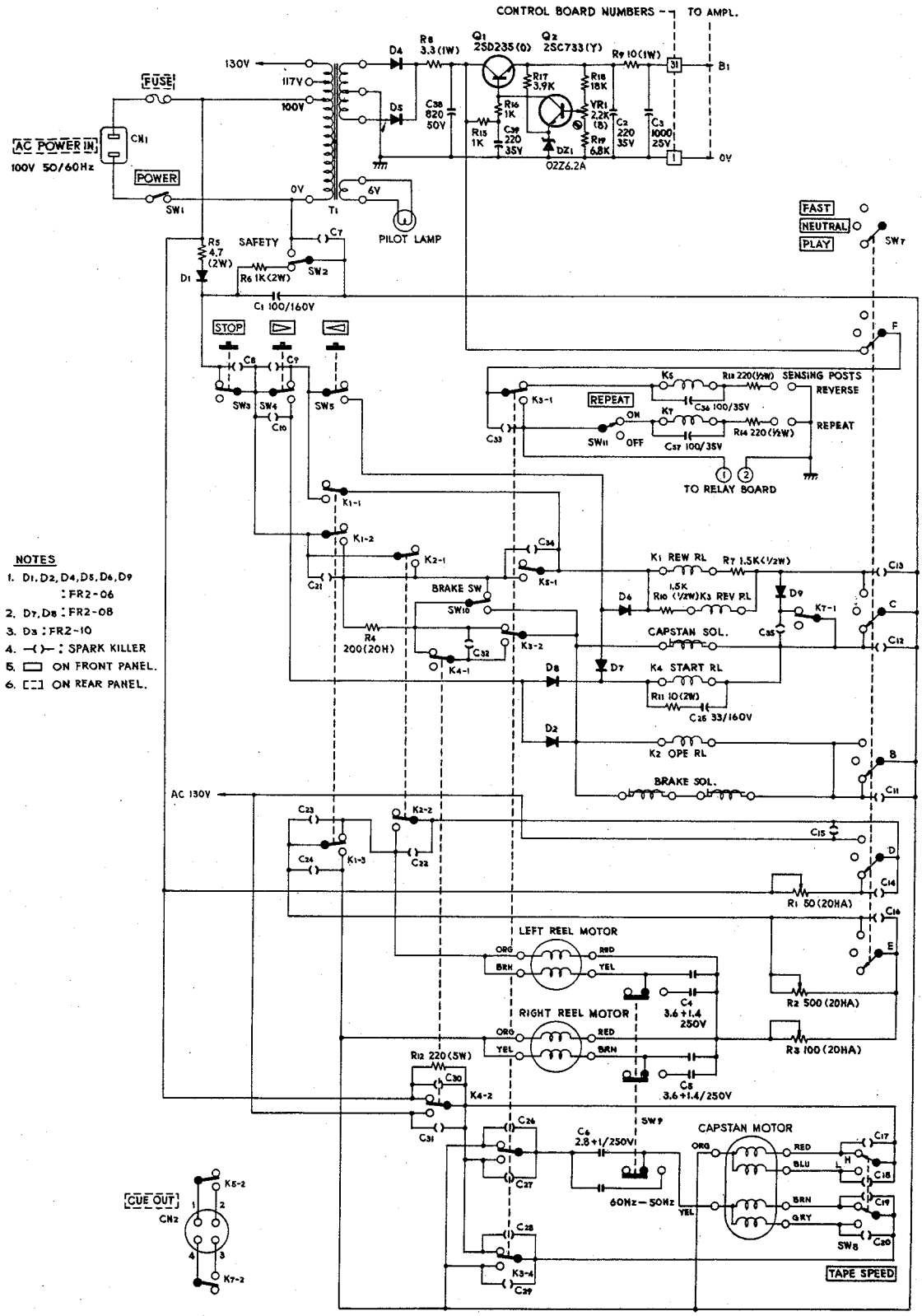
REV·FWD MODE SELECT RELAY



CIRCUIT REF.NO.	TEAC PARTS NO.	DESCRIPTION	1st	2nd	3rd
	50483330	PC Board Assy			
	50611010	Relay, Sub Miniature			
	50574680	Resistor, Carbon 330Ω 1/2W			
	50554510	Cap., Elec. 10 35V			

SCHEMATIC DIAGRAM
A-2420

TAPE TRANSPORT A-2420



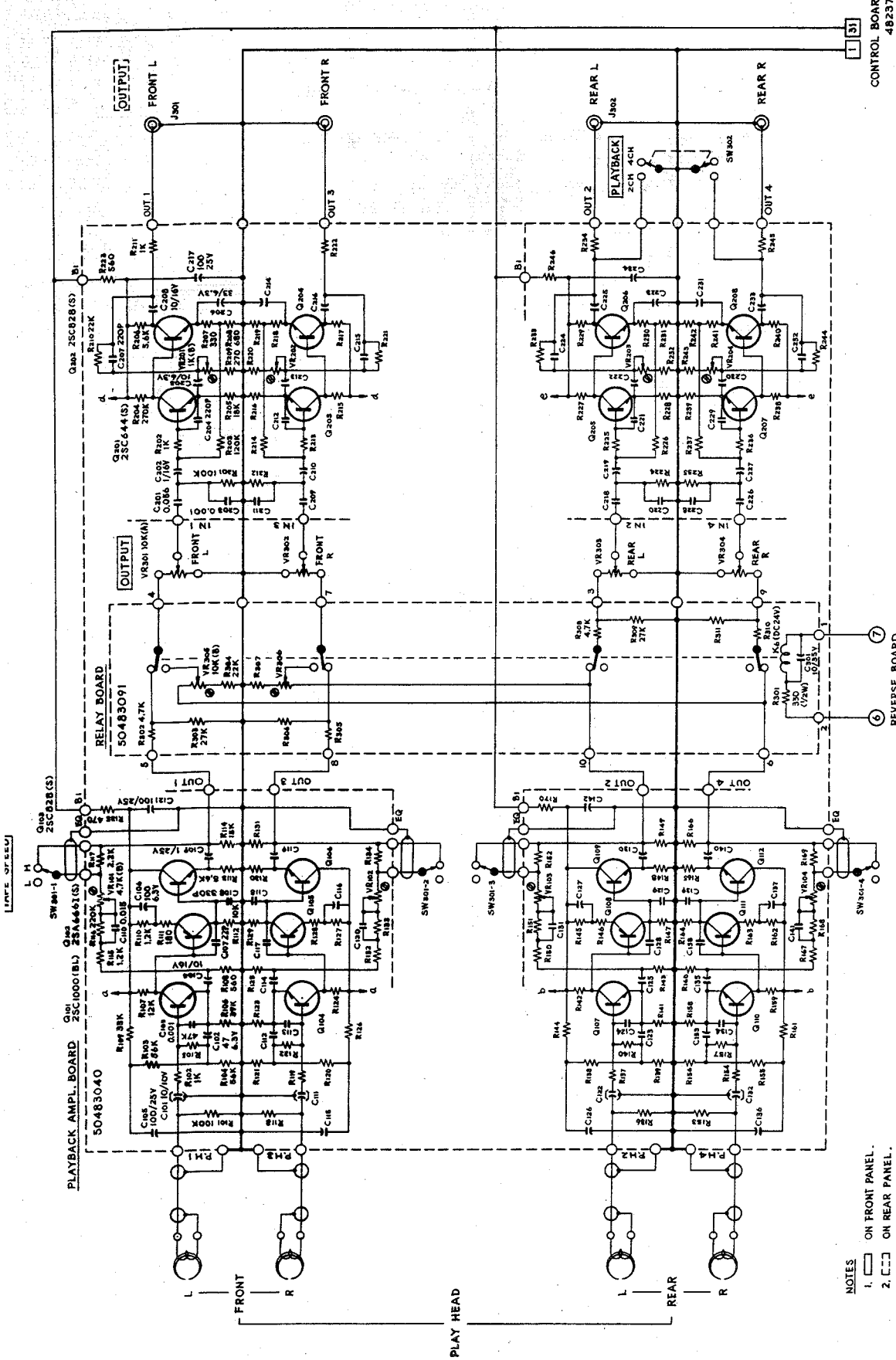
NOTES

1. D1, D2, D4, D5, D6, D9 : FR2-06
2. D7, D8 : FR2-08
3. D3 : FR2-10
4. —(⟩— : SPARK KILLER
5. ▭ ON FRONT PANEL.
6. [▭] ON REAR PANEL.

SCHEMATIC DIAGRAM

A-2420

PLAYBACK AMPLIFIER A-2420



NOTES

1. □ ON FRONT PANEL.
2. □□ ON REAR PANEL.
3. ALL RESISTORS ARE Ω (1/4W) UNLESS OTHERWISE NOTES.
4. ALL CAPASITORS ARE μF UNLESS OTHERWISE NOTES.